Site Prep CCTV Security Camera System

#568-12-103

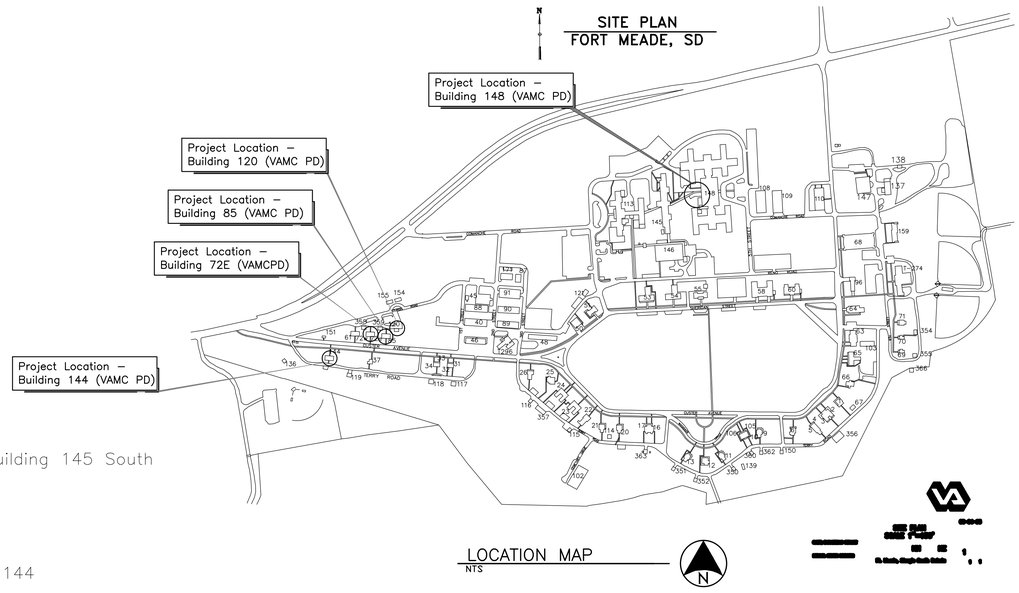
FT. MEADE, SOUTH DAKOTA

ARCHITECTURAL
FOURFRONT DESIGN INC.
PH: (605) 342-9470 FAX: (605) 348-0571

MECHANICAL ENGINEERING
WEST PLAINS ENGINEERING
PH: (605) 348-7455 FAX: (605) 348-9445

ELECTRICAL ENGINEERING
WEST PLAINS ENGINEERING
PH: (605) 348-7455 FAX: (605) 348-9445

PROJECT INDEX:



Revisions	Date

CONSULTANTS:

ARCHITECT/ENGINEERS:

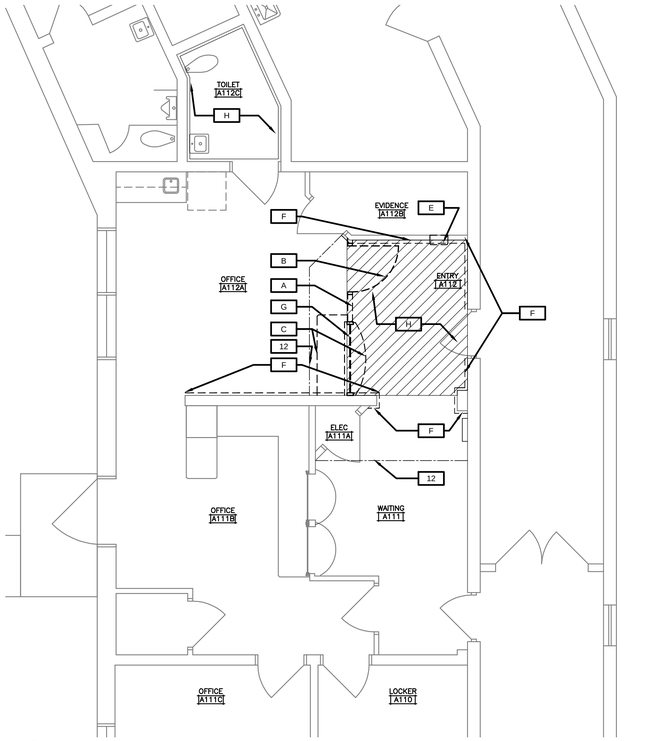
517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)

10.1749.008

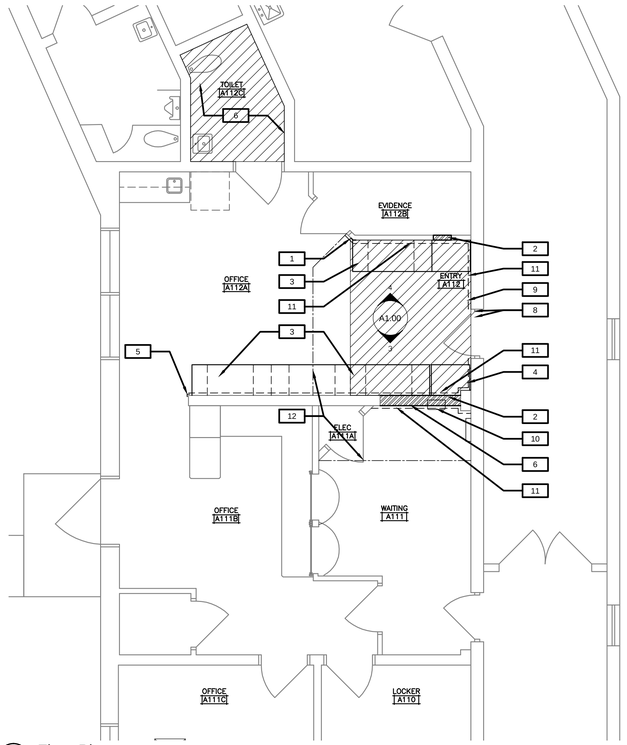
Drawing Title	Demolition, Floor and Ceiling Plans and Interior Elevations
Approved Project Director	
Project Title	CCTV Security Camera System REBID
Location	Ft. Meade, South Dakota
Date	11/16/12
Checked	KS
Drawn	AH
Project Number	568-12-103
Building Numbers	148, 120, 85, 72E, 144
Drawing Number	G0.00 Dwg. 1 of 15

Office of Construction and Facilities Management
Department of Veterans Affairs

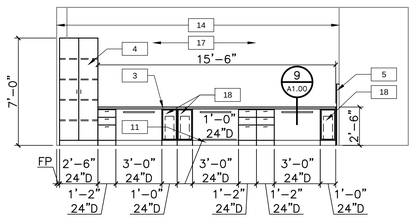
VA FORM 08-6231



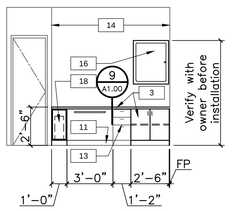
1 A1.00 Demolition Plan
1/4" = 1'-0"



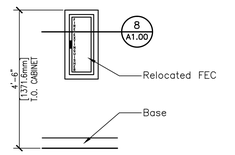
2 A1.00 Floor Plan
1/4" = 1'-0"



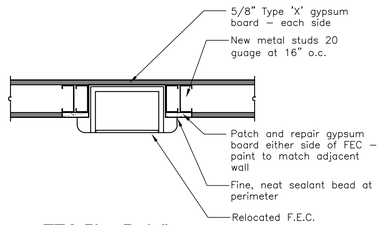
3 A1.00 Interior Elevation
1/4" = 1'-0"



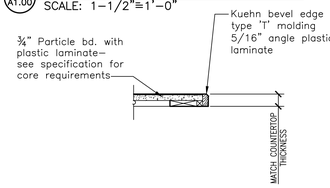
4 A1.00 Interior Elevation
1/4" = 1'-0"



7 A1.00 FEC Elevation
SCALE: 1/2"=1'-0"



8 A1.00 FEC Plan Detail
SCALE: 1-1/2"=1'-0"

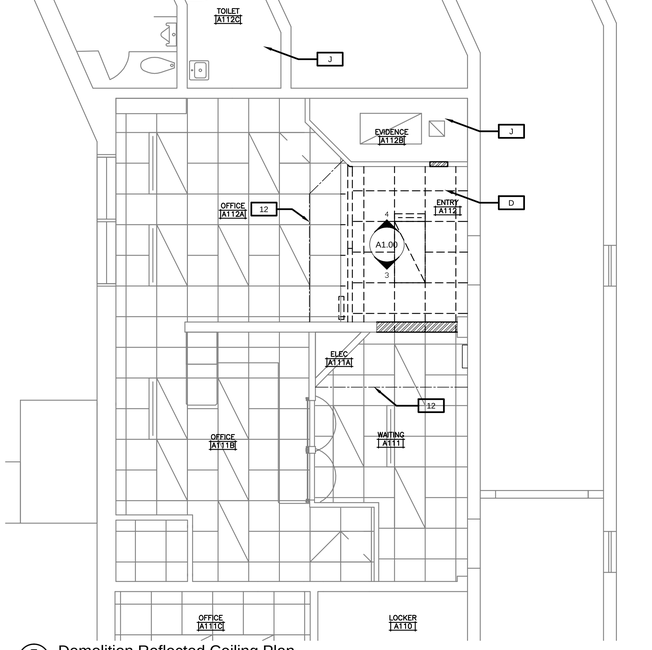


9 A1.00 Edge Detail
SCALE: 1-1/2"=1'-0"

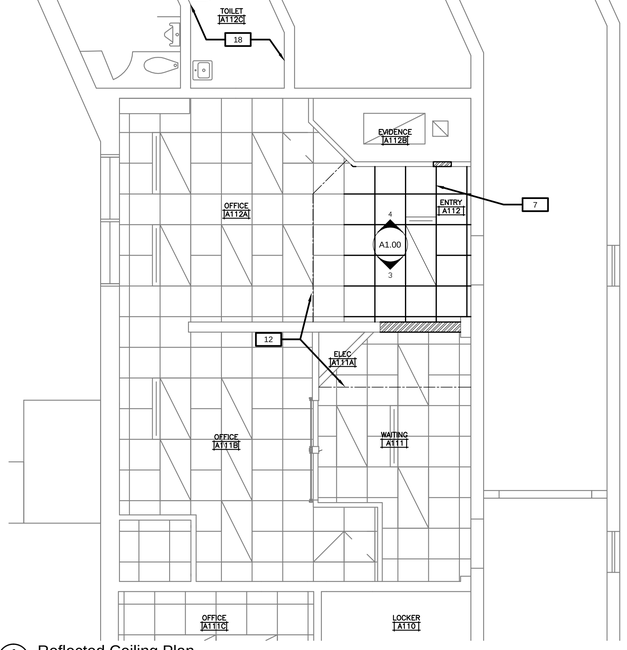
General Notes:
1. The owner will occupy the space during construction. Contractor will coordiante with owner for construction activities. Space is to be available 24 hours a day. See cabinet specification noting special detailing at CPU cabinet.
2. Install wall mounted monitors and brackets in Building 113 room 187D and Building 148 room D109. Coordinate locations with electrical drawings.

Demolition Keynotes:
- A. Remove wall.
- B. Remove door and frame.
- C. Remove counter. Remove and salvage base cabinet.
- D. Remove and salvage existing acoustic ceiling tile and grid.
- E. Remove and salvage existing fire extinguisher cabinet.
- F. Remove vinyl base to allow for new base cabinet.
- G. Remove frame/window.
- H. Remove existing flooring and base. Prep floor for new flooring and base. Remove wall mounted accessories.
- J. Existing ceiling to remain.

Remodel Keynotes:
1. Patch wall and paint to match existing (P1).
2. Infill wall and paint to match adjacent wall surface (P1).
3. New casework and countertop to match existing.
4. Full height cabinet to match existing.
5. Corner Guard at 4'-0" high, match existing verify in field.
6. New paint and new sheet vinyl (SV1) with 6" cove base. Reinstall wall mounted accessories.
7. New and reinstalled acoustic ceiling tile and grid. Adjust grid as shown. (ACT 1)
8. Touch up wall and door frame paint.
9. New floor finish to match existing style, color and pattern (VT1). Install under cabinets.
10. Reinstall fire extinguisher cabinet in new location. See detail 7/A1.00.
11. Install new vinyl base, entire length of wall, to match existing. Paint full length of wall to ensure even color (P1).
12. Install zipwall enclosure to contain construction work area to this space. Coordinate with owner.
13. Relocated base cabinet.
14. New paint (P1). Paint full length of wall to ensure even color.
15. Plastic laminate filler panel from cabinet to wall.
16. Key cabinet. See specification.
17. Contractor to install 3 larger monitors/TV brackets. Coordinate location with electrical drawings.
18. CPU base cabinet. Hold finish panel 6" from wall (on this side only) to provide venting for CPU.



5 A1.00 Demolition Reflected Ceiling Plan
1/4" = 1'-0"



6 A1.00 Reflected Ceiling Plan
1/4" = 1'-0"

Revisions	Date

CONSULTANTS:

REGISTERED ARCHITECT Kenneth Sawyer 11-16-12

ARCHITECT/ENGINEERS:

FOURFRONT DESIGN INC

517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)

10.1749.008

Drawing Title: Demolition, Floor and Ceiling Plans and Interior Elevations

Approved Project Director:

Project Title: CCTV Security Camera System REBID

Location: Ft. Meade, South Dakota

Date: 11/16/12 | Checked: KS | Drawn: AH

Project Number: 568-12-103

Building Numbers: 148, 120, 85, 72E, 144

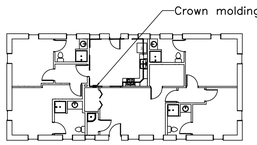
Drawing Number: A1.00
Dwg. 2 of 15

Office of Construction and Facilities Management

Department of Veterans Affairs

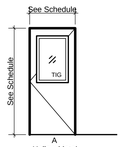
VA FORM 08-6231

Additional work needed for security work:
Building 144:
1. Provide crown molding the kitchen to hide electrical.
See details 1/A1.01 and 2/A1.01.

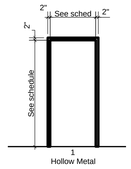


1 A1.01 Building 144
1/16" = 1'-0"

2 A1.01 Crown Moulding Profile
3" = 1'-0"



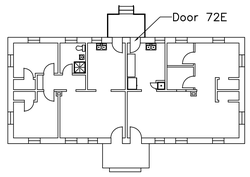
3 A1.01 Door Elevations
1/4" = 1'-0"



4 A1.01 Frame Elevations
1/4" = 1'-0"

DOOR & FRAME SCHEDULE

Location	DOOR					FRAME		WINDOW	COMMENTS
	Label	Material	Width	Height	Glazing	Label	Material		
Bldg 72E	A	HM	35-3/4"	84"	TYG	1	HM	HW-1	Field verify dimensions and conditions
Bldg 85E	A	HM	35-1/2"	84-3/8"	TYG	1	HM	HW-1	Field verify dimensions and conditions
Bldg 85W	A	HM	35-1/2"	84-3/8"	TYG	1	HM	HW-1	Field verify dimensions and conditions
Bldg 120W	A	HM	40-3/8"	82"	TYG	1	HM	HW-1	Field verify dimensions and conditions
Bldg 120S	A	HM	40-1/2"	84"	TYG	1	HM	HW-1	Field verify dimensions and conditions

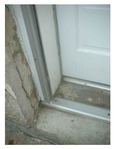


1 A1.01 Building 72
1-1/2" = 1'-0"

Additional work needed for security work:
Building 72E:
1. Remove the existing exterior door/screen (72E), frame, trim and hardware including sill-total 1.
2. Provide new hollow metal exterior door and frame (72E) and hardware including sill-total 1.
a. See door and frame schedule for sizes.

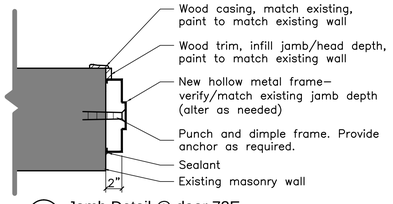

Elevation


Head


Sill


Sill

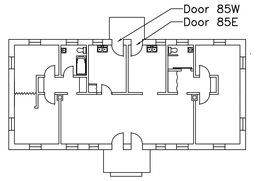
Remove existing concrete at sill-
Provide new concrete that slopes from new sill to landing.
Approximately 2-1/2"H.



1 A1.01 Jamb Detail @ door 72E
Scale: 1-1/2" = 1'-0

1 A1.01 Pictures of existing door 72E
No Scale

Additional work needed for security work:
Building 85:
1. Remove the existing exterior door/screen (85W), frame, trim and hardware including sill-total 1.
2. Remove the existing exterior door/screen (85E), frame, trim and hardware including sill-total 1.
3. Provide new hollow metal exterior door and frame (85W) and hardware including sill-total 1.
a. See door and frame schedule for sizes.
4. Provide new hollow metal exterior door and frame (85E) and hardware including sill-total 1.
a. See door and frame schedule for sizes.



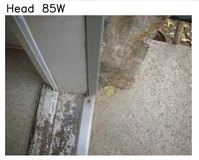
N
1 A1.01 Building 85
1/16" = 1'-0"

Elevation


Head 85W

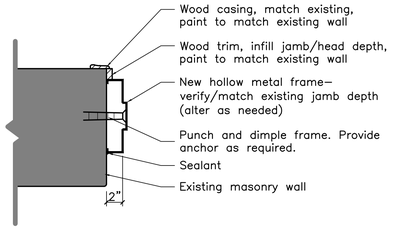

Head 85W


Head 85E

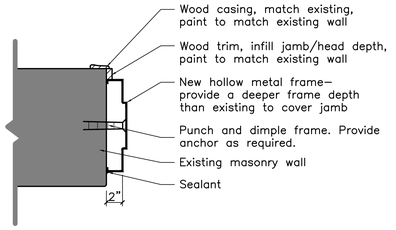

Sill 85W

Sill 85E

1 A1.01 Pictures of existing door 85W and 85W
No Scale

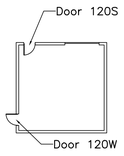


1 A1.01 Jamb Detail @ door 85W
Scale: 1-1/2" = 1'-0



1 A1.01 Jamb Detail @ door 85E
Scale: 1-1/2" = 1'-0

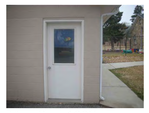
Additional work needed for security work:
Building 120:
1. Remove the existing exterior door/screen (120W), frame, trim and hardware including sill-total 1.
2. Remove the existing exterior door (120N), frame, trim and hardware including sill-total 1.
3. Provide new hollow metal exterior door and frame (120W) and hardware including sill-total 1.
a. See door and frame schedule for sizes.
4. Provide new hollow metal exterior door and frame (120N) and hardware including sill-total 1.
a. See door and frame schedule for sizes.



N
1 A1.01 Building 120
1/16" = 1'-0"


Elevation 120W


Head 120W

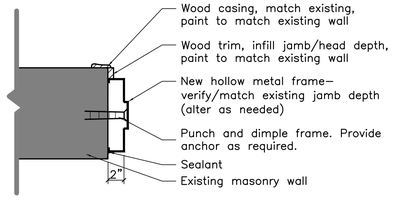

Elevation 120N


Head 120N


Sill 120W


Sill 120N

1 A1.01 Pictures of existing door 120W and 120S
No Scale



1 A1.01 Jamb Detail @ door 120W & 120N
Scale: 1-1/2" = 1'-0

General notes:
1. Patch ceiling as required for security work. Repaint ceilings as required.
2. Paint new doors and frames- color selected by owner. Paint interior of doors and frames a different color than exterior.
3. Exterior hollow metal frame shall be a minimum of 2" wide to allow card reader to be mounted on the frame without interfering with the door swing.

Revisions:	Date

CONSULTANTS:

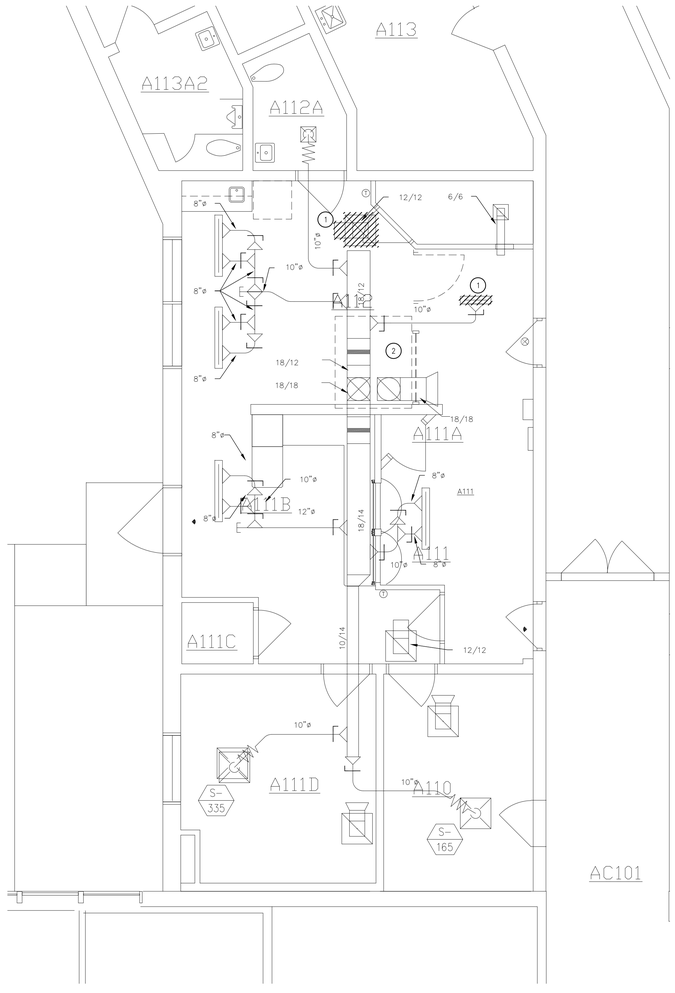
REGISTERED ARCHITECT
KATHRYN A. SAMUELL
SOUTH DAKOTA
11-16-12

ARCHITECT/ENGINEERS:
FOURFRONT DESIGN INC
517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)
10.1749.008

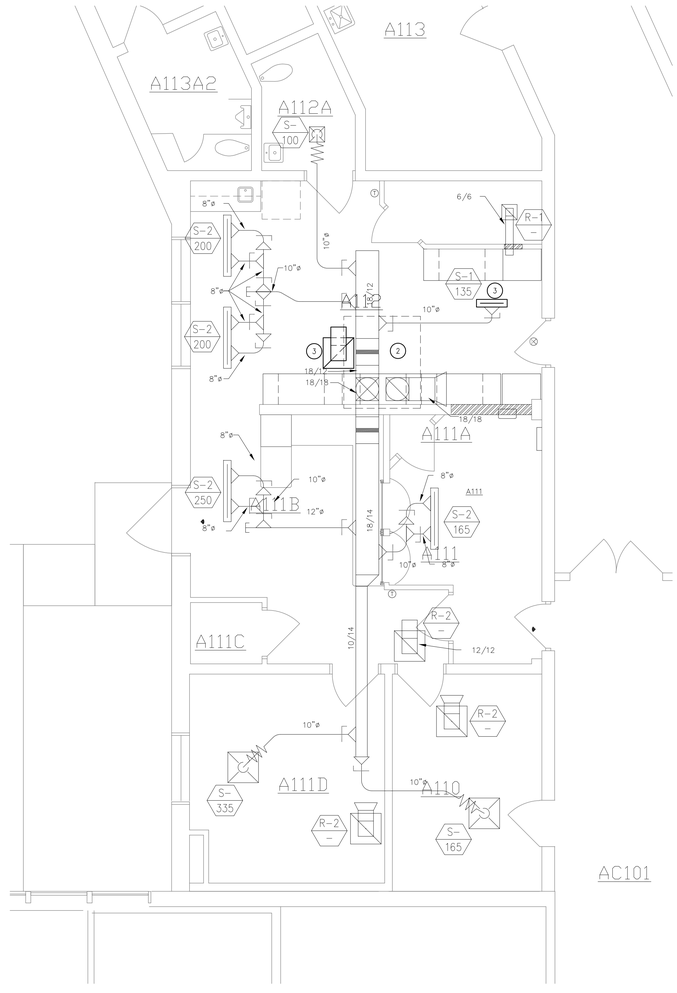
Drawing Title: Work in Buildings 120, 85, 72 and 44
Approved: Project Director
Project Title: CCTV Security Camera System REBID
Location: Ft. Meade, South Dakota
Date: 11/16/12
Checked: KS
Drawn: KS
Project Number: 568-12-103
Building Numbers: 148, 120, 85, 72E, 144
Drawing Number: A1.01
Dwg. 3 of 15

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231



1 M1.00 MECHANICAL DEMOLITION PLAN
1/4" = 1'-0"



2 M1.00 MECHANICAL PLAN
1/4" = 1'-0"

GENERAL MECHANICAL NOTES:

A. COORDINATE LOCATION OF DUCTWORK WITH STRUCTURE AND OTHER TRADES. INSTALL DUCTWORK AS HIGH AS POSSIBLE.

B. EXISTING FIRE SPRINKLER SYSTEM TO BE MODIFIED AS REQUIRED TO ACCOMMODATE REMODEL. CONTRACTOR TO FIELD VERIFY EXISTING FIRE SPRINKLER LOCATIONS. REMOVE AND REPLACE ALL EXISTING FIRE SPRINKLER HEADS AND ASSOCIATED BRANCH PIPING NECESSARY TO PROVIDE FIRE SPRINKLER COVERAGE IN ACCORDANCE TO NFPA 13. THE EXISTING FIRE SPRINKLER COVERAGE OUTSIDE OF THE IMMEDIATE AREA OF REMODEL SHALL REMAIN IN SERVICE WITH EXCEPTION TO SHORT OUTAGES REQUIRED FOR DISCONNECTING AND RECONNECTING BRANCH LINES. OUTAGES SHALL BE SCHEDULED WITH THE VA FIRE DEPARTMENT WITH PROTECTION TO NON-CONSTRUCTION AREAS TO BE RESTORED AT THE END OF EACH SHIFT.

C. COORDINATE PHASING AND REMOVAL OF EXISTING DUCTWORK, ETC., WITH OWNER.

D. REMOVE EXISTING GRILLES, REGISTERS, DUCTWORK, PIPING, ETC. WHERE INDICATED BY HATCHING. CAP DUCTWORK DURING CONSTRUCTION.

E. CONTRACTOR TO CONFIRM SIZE AND LOCATIONS OF EXISTING DUCTWORK.

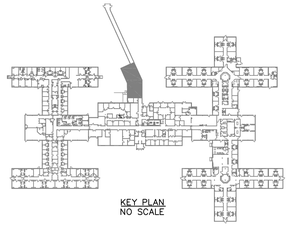
F. REBALANCE SYSTEM TO CFM VALUES AS INDICATED.

SPECIFIC MECHANICAL NOTES: (F)

1. REMOVE EXISTING GRILLES AND DIFFUSERS AND RETAIN FOR RELOCATION. REFER TO SHEET 2/M1.0 FOR NEW LOCATION.

2. EXISTING ROOF TOP UNIT CAPACITY IS CAPABLE OF AN ADDITIONAL 15MBH/5KW OF ADDITIONAL COOLING LOAD WITHIN THE SPACE. UNIT IS COOLING ONLY WITH HYDRONIC REHEAT COILS FOR TWO ZONES.

3. INSTALL RELOCATED DIFFUSER WITHIN NEW CEILING GRID. ALL NEW DUCTWORK SHALL MEET THE REQUIREMENTS OF SMACNA.



Revisions:	Date

CONSULTANTS:

WPE #BR11046

WPE WEST PLAINS ENGINEERING, INC.
1750 RAND ROAD • RAPID CITY, SD 57702
PHONE: (605) 348-7455 • FAX: (605) 348-9445
www.westplainsengineering.com
RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 8462
MICHAEL SEAN HEINRICH
SOUTH DAKOTA
11/16/12

ARCHITECT/ENGINEERS:

FOURFRONT DESIGN INC

517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)

10.1749.008

Drawing Title: MECHANICAL PLANS

Approved: Project Director

Project Title: CCTV Security Camera System REBID
-

Location: Ft. Meade, South Dakota

Date: 11/16/12 | Checked: MSH | Drawn: CFH

Project Number: 568-12-103

Building Number: 148

Drawing Number: M1.00
Dwg. 1 of 15

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231

MECHANICAL SYMBOLS

DEMOLITION HATCHING

VENTILATION SYMBOLS

SUPPLY DUCT (UP & DOWN)

RETURN DUCT (UP & DOWN)

EXHAUST DUCT (UP & DOWN)

STANDARD RADIUS ELBOW
R EQUAL W (MINIMUM)

DUCT TURN WITH TURN VANES

FLEXIBLE DUCT CONNECTION

SPIRAL DUCTWORK

LOW PRESURE DUCTWORK
MAX 2" W.G. PRESSURE

MEDIUM PRESSURE DUCTWORK
2"-6" W.G. PRESSURE

F-FIRE DAMPER M-MOTORIZED DAMPER
S-SMOKE DAMPER B-BACKDRAFT DAMPER
C-COMBINATION FIRE SMOKE DAMPER

MANUAL VOLUME DAMPER

BRANCH DUCT INTO SIDE OF MAIN DUCT

R OR S — DUCT RISE OR DROP IN DIRECTION OF AIR FLOW

12/8 — DUCT DIMENSION- WIDTH x DEPTH

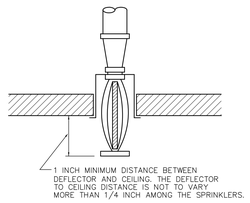
DUCT INSULATION
(SEE SPECIFICATION)

DUCT TURN AND AIR SPLIT TYPE TAKEOFF
(NON-ADJUSTABLE)

A1 / 200 CFM — TYPE OF EQUIP
GRILLE, REGISTER & DIFFUSER DESIGNATION
SUPPLY, RETURN, EXHAUST, & TRANSFER

EF / 1 — TYPE OF EQUIP / EQUIP. NO.
EQUIPMENT DESIGNATION

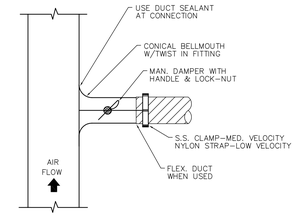
FLEX DUCT (5' MAXIMUM)



1 INCH MINIMUM DISTANCE BETWEEN DEFLECTOR AND CEILING. THE DEFLECTOR TO CEILING DISTANCE IS NOT TO VARY MORE THAN 1/4 INCH AMONG THE SPRINKLERS.

RECESSED SPRINKLER DETAIL

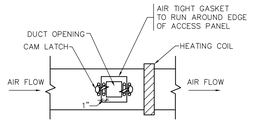
NO SCALE



ROUND DUCT TAKE-OFF DETAIL

NO SCALE

NOTE:
REQUIRED AT ALL HEATING COILS, FIRE DAMPERS, SMOKE DAMPERS, MOTORIZED DAMPERS & HUMIDIFIERS--SEE SPECIFICATIONS

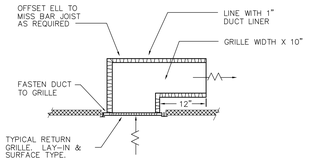


ACCESS PANEL SIZE SCHEDULE		
DUCT SIZE	ACCESS PANEL SIZE	
6" TO 15"	10"W X	DUCT DEPTH-2" D
15" TO 21"	12"W X	DUCT DEPTH-2" D
21" AND ABOVE	18"W X	DUCT DEPTH-2" D

ALL OTHER ACCESS PANELS TO BE A MINIMUM OF 15" X 15" WHERE DUCT SIZE ALLOWS. USE FOUR CAM LATCHES ON PANELS LARGER THAN 18" X 18" SIZE.

ACCESS PANEL DETAIL

NO SCALE



INSULATED RETURN ELBOW DETAIL

NO SCALE

Revisions	Date

CONSULTANTS:

WPE #BR11046

WEST PLAINS ENGINEERING, INC.
1750 RAND ROAD • RAPID CITY, SD 57702
PHONE: (605) 348-7455 • FAX: (605) 348-9445
www.westplainsengineering.com
RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 8462
MICHAEL SEAN HEINRICH
SOUTH DAKOTA
11/16/12

ARCHITECT/ENGINEERS:

FOURFRONT DESIGN INC

517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)

10.1749.008

Drawing Title: MECHANICAL DETAILS AND SYMBOLS

Approved Project Director:

Project Title: CCTV Security Camera System REBID -

Location: Ft. Meade, South Dakota

Date: 11/16/12 | Checked: MSH | Drawn: CFH

Project Number: 568-12-103

Building Number: 148

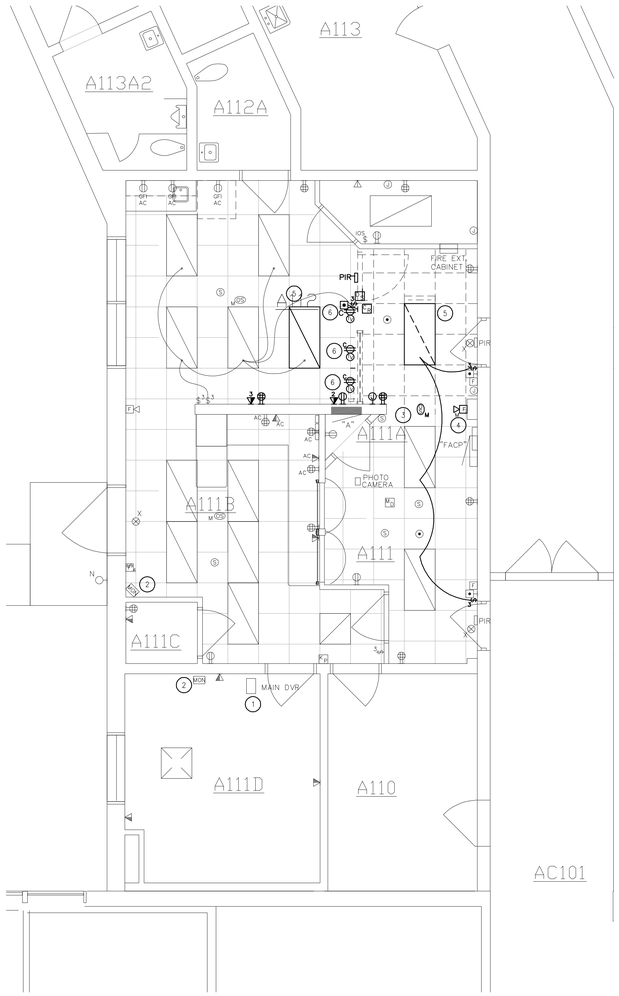
Drawing Number: M2.00

Dwg. 1 of 15

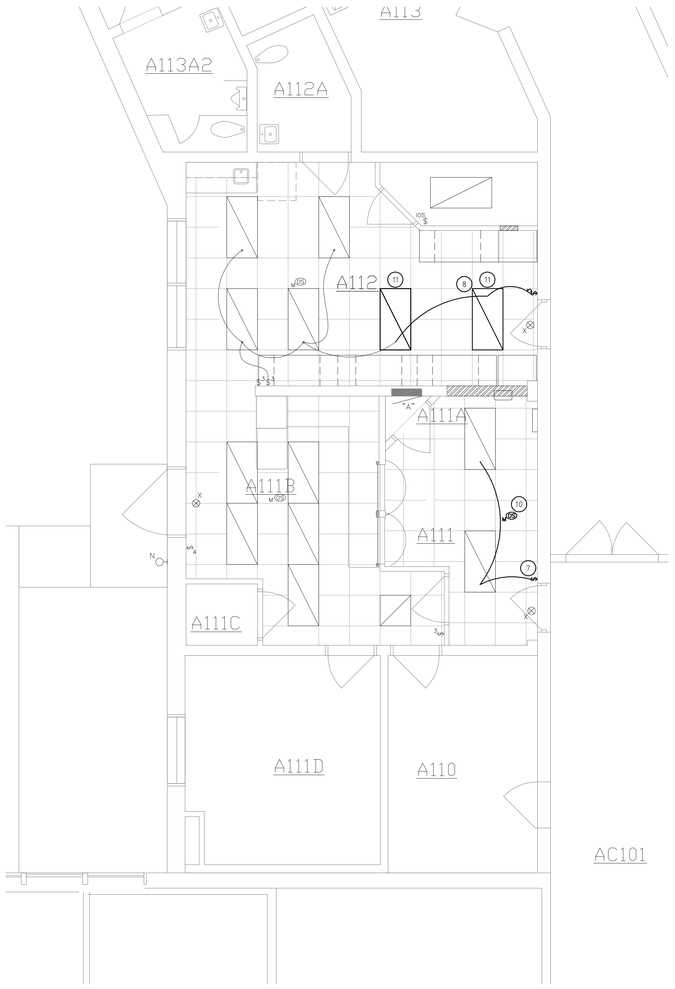
Office of Construction and Facilities Management

Department of Veterans Affairs

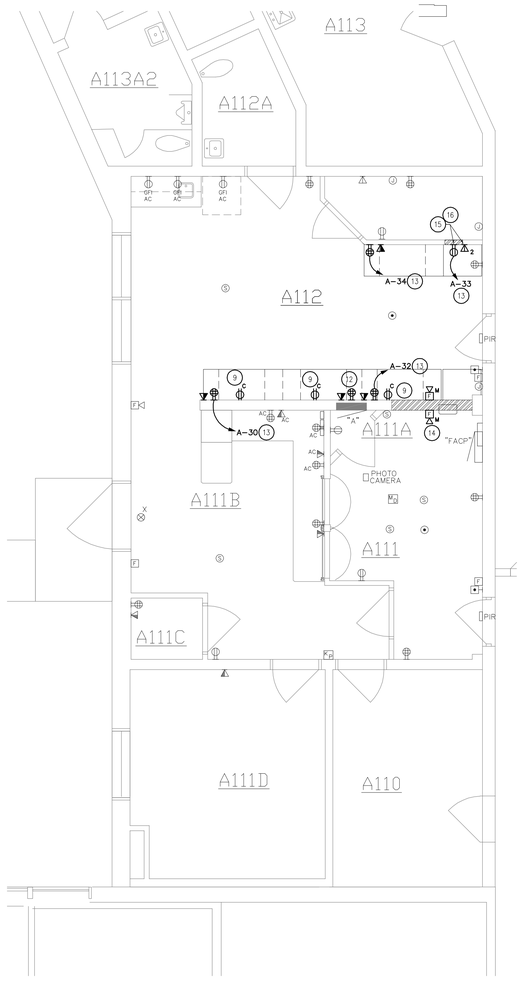
VA FORM 08-6231



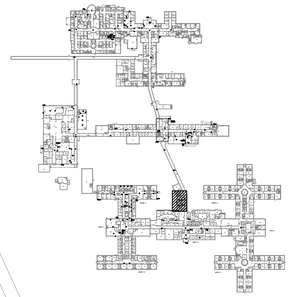
1 E1.00 ELECTRICAL DEMOLITION PLAN
1/4" = 1'-0"



2 E1.00 LIGHTING PLAN
1/4" = 1'-0"



2 E1.00 POWER & SIGNAL PLAN
1/4" = 1'-0"



KEYPLAN
NO SCALE

MISCELLANEOUS ELECTRICAL NOTES:

A. ITEMS SHOWN IN DARK PEN ON ELECTRICAL DEMOLITION PLAN ARE TO BE DEMOED OR MODIFIED AS SPECIFICALLY NOTED. WHERE ITEMS ARE TO BE DEMOED CONTRACTOR IS TO REMOVE ALL EXISTING CONDUIT AND WIRE BACK TO THE SOURCE OR NEXT ACTIVE DEVICE. IF OTHER ITEMS THAT ARE NOT SHOWN TO BE DEMOED ARE FED DOWN STREAM OF A DEVICE SHOWN TO BE DEMOED CONTRACTOR SHALL MAKE MODIFICATIONS NECESSARY TO ENSURE THAT THE EXISTING ITEMS THAT REMAIN CONTINUE TO OPERATE.

B. combination telephone/data outletS SHALL CONSIST OF 4–11/16 inch by 4–11/16 inch dual device "deep" 2–1/8 inch style junction box (42 cubic inches) with a single gang mud ring and a 3/4 inch conduit to ROOM ACT2, conduit shall be banded to cable tray. Combination Voice/Data Outlets shall include A FOUR PORT IVORY COLORED MODULAR JACK FACE PLATE WITH four (4) RJ–45/8wire modular jacks rated Category 5e. Each jack shall be fed by its own Category 5e 4 pair cable. Two of these jacks will be voice and two will be data. All cables will be terminated at patch panels in the COMMUNICATIONS Closet. WIRING, FACEPLATES, AND JACKS SHALL MATCH va STANDARD. COORDINATE WITH OWNER.

C. EXISTING FIRE ALARM SYSTEM IS A SIMPLEX system. all new devices supplied as part of this project must be ul listed for use with existing panel. all new wiring shall match existing in type and distribution method. the fire alarm system shall be tested and recertified as required by NFPA 72. copies of all test reports to be included with operation and maintenance manuals at completion of project.

SPECIFIC ELECTRICAL NOTES:

1. EXISTING DVR LOCATION (#)
2. EXISTING VIDEO MONITOR LOCATION.
3. RELOCATE EXISTING OCCUPANCY SENSOR AND CONTROL LIGHTS AS INDICATED IN LIGHTING PLAN.
4. RELOCATE EXISTING HORN/STROBE TO NEW LOCATION AS INDICATED IN POWER & SIGNAL PLAN.
5. RELOCATE EXISTING LIGHT FIXTURE AS INDICATED IN LIGHTING PLAN.
6. RELOCATE EXISTING CEILING MOUNTED RECEPTACLES AS INDICATED ON POWER & SIGNAL PLAN FOR NEW MONITOR LOCATIONS.
7. MODIFY EXISTING SWITCHING OF THIS AREA FROM THREE WAY TO SINGLE POLE SWITCH AND OCCUPANCY SENSOR CONTROL.
8. MODIFY SWITCHING IN THIS AREA TO OPERATE AS SHOWN. OCCUPANCY SENSOR CONTROLLING EXISTING LIGHTS SHALL ALSO CONTROL THE NEW LIGHT BEING ADDED TO THIS AREA.
9. RELOCATED RECEPTACLES FOR NEW MONITORS.
10. NEW LOCATION FOR RELOCATED OCCUPANCY SENSOR.
11. NEW LOCATION FOR RELOCATED LIGHT FIXTURE.
12. PROVIDE POWER TO NEW QUAD RECEPTACLE FROM POWER THAT WAS FEEDING QUAD RECEPTACLE THAT WAS DEMOLISHED.
13. PROVIDE POWER FROM EXISTING SPARE 20A/1P BREAKER IN PANEL A.
14. NEW LOCATION FOR RELOCATED FIRE ALARM MINI STROBE.
15. PROVIDE POWER AND DATA CONNECTIONS FOR KEY CONTROL CABINET BEING SUPPLIED BY GENERAL CONTRACTOR. COORDINATE ELEVATION OF POWER AND DATA WITH GENERAL CONTRACTOR.
16. NEW KEY CONTROL CABINET IS TO BE SUPPLIED WITH CARD KEY SYSTEM THAT IS COMPATIBLE WITH THE EXISTING JOHNSON CONTROL P2000 CARD ACCESS SYSTEM. CONTRACTOR TO INTEGRATE THIS NEW ITEM INTO THE J2000 SYSTEM TO TRACK ACCESS AND ALARM.

Revisions	Date

CONSULTANTS:

WPE #BR11046

WEST PLAINS ENGINEERING, INC.
1750 RAND ROAD • RAPID CITY, SD 57702
PHONE: (605) 348-7455 • FAX: (605) 348-9445
www.westplainsengineering.com
RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 7595
MICHAEL RAYMOND SIGMAN
SOUTH DAKOTA
11/16/12

ARCHITECT/ENGINEERS:

FOURFRONT DESIGN INC
517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)

10.1749.008

Drawing Title: POLICE/SECURITY ELECTRICAL PLANS

Approved: Project Director

Project Title: CCTV Security Camera System REBID –

Location: Ft. Meade, South Dakota

Date: 11/16/12 | Checked: MRS | Drawn: VLS

Project Number: 568-12-103

Building Number: 148

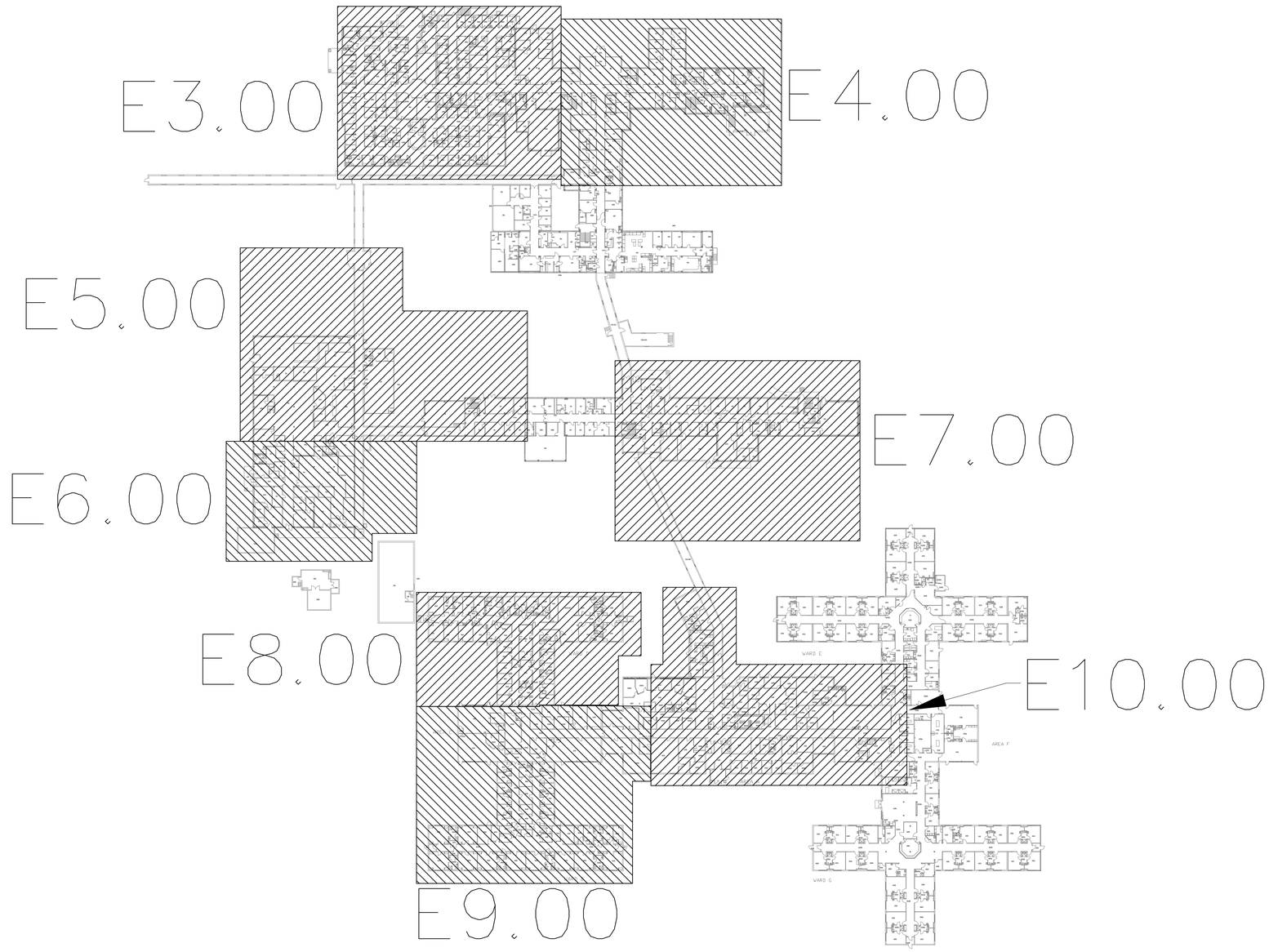
Drawing Number: E1.00

Dwg. 5 of 15

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231



1 E2.00 OVERALL CCTV/SECURITY PLAN - SHEET INDEX
1" = 50'-0"

three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot

Revisions	Date

CONSULTANTS:

WPE #BR11046

WPE WEST PLAINS ENGINEERING, INC.
1750 RAND ROAD • RAPID CITY, SD 57702
PHONE: (605) 348-7455 • FAX: (605) 348-9445
www.westplainsengineering.com
RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 7595
MICHAEL RAYMOND SIGMAN
SOUTH DAKOTA
11/16/12

ARCHITECT/ENGINEERS:

FOURFRONT DESIGN INC

517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)

10.1749.008

Drawing Title	OVERALL CCTV/SECURITY PLAN - SHEET INDEX
Approved: Project Director	
Project Title	CCTV Security Camera System REBID -
Location	Ft. Meade, South Dakota
Date	11/16/12
Checked	MRS
Drawn	VLS
Project Number	568-12-103
Building Number	113
Drawing Number	E2.00
Dwg.	6 of 15

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231

KEYPLAN
NO SCALE

MISCELLANEOUS ELECTRICAL NOTES:

A. CAMERA LOCATIONS ARE SHOWN APPROXIMATE. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL CAMERAS WITH OWNER PRIOR TO ANY WORK. CAMERAS MAY BE MOVED UP TO 20 FEET IN ANY DIRECTION.

B. data cabling from each camera location shall consist of cat 5e cabling in a 3/4 inch conduit ran back to the appropriate communications closet indicted. Each end shall be terminated for connection of camera to the system. All cables will be terminated at patch panels in the COMMUNICATIONS Closet. WIRING, FACEPLATES, AND JACKS SHALL MATCH va STANDARD. COORDINATE WITH OWNER.

C. NO CONDUIT SHALL BE RUN EXPOSED IN FINISHED AREAS. CONTRACTOR TO USE WIREMOLD FOR POWER AND DATA WERE INDICATED.

SPECIFIC ELECTRICAL NOTES: (#)

1. EXISTING DOOR WITH CARD READER AND POSITION SWITCH BEING MONITORED AND CONTROLLED BY JOHNSON CONTROLS P2000 SECURITY SYSTEM.
2. MOUNT CAMERA TO FACE OF CANOPY.
3. CONTRACTOR TO PROVIDE DATA OUTLET AT THIS LOCATION WITH TWO CAT 5E CABLES BACK TO DATA RACK IN CLOSET EC1E. CABLES SHALL BE TERMINATED ON EACH END. PROVIDE FOUR PORT IVORY FACEPLATE WITH RJ-45 JACKS. WIRING, FACEPLATE AND JACKS SHALL MATCH VA STANDARD. PROVIDE COMPUTER EQUAL TO THE FOLLOWING: CONVERTIBLE CASE FOR DESKTOP OR TOWER USE; 1-CORE I7 2600 3.4GHZ PROCESSOR WITH 8MB CACHE, 1333MHz MEMORY; 4GB RAM; 1-3.5" 7200RPM SATA 500GB HARD DRIVE; DVD±RW (±R DL) / DVD-RAM; NVIDIA QUADRO 600; GIGABIT ETHERNET CONNECTION; 1GB DUAL PORT VIDEO CARD; WINDOWS 7 ENTERPRISE 64 BIT. PROVIDE NEW 22" MONITOR WITH WALL MOUNTING BRACKET. PROVIDE CONNECTION OF NEW MONITOR TO CCTV SYSTEM BY WAY OF NEW COMPUTER. PROVIDE MILESTONE SMART CLIENT ON COMPUTER AND SET UP VIEWS AS REQUIRED.
4. ALL CAT 5E CABLE FOR CAMERAS SHOWN ON SHEETS E3.00 AND E4.00 TO BE RUN BACK TO THIS CLOSET. CONTRACTOR TO PROVIDE A NEW CISCO CATALYST 3750 48 PORT VERSION 2 POE SWITCH IN EXISTING COMMUNICATIONS RACK. EXISTING RACK IS A MID-ATLANTIC WITH SPACE IN RACK MOUNTING UNITS 24 THROUGH 40. PROVIDE POWER FROM PANEL E103. PANEL E103 IS A SQUARE D NQDD424L100 SERIES E2 PANEL. PROVIDE ONE NEW 20A/1P, 22KAIC BREAKER IN SPACE 18 FOR POWER FOR HEATER/BLOWER TRANSFORMERS.
5. PROVIDE 120V POWER AND 12V DC TRANSFORMER AT THIS LOCATION FOR HEATER/BLOWER POWER.
6. MOUNT CAMERA TO FACE OF BUILDING.
7. CAT 5E CABLE FOR CAMERA C21 SHALL BE RUN BACK ROOM 117 OF BUILDING 146 SHOWN ON SHEET E6.00

1 E3.00 CCTV/ SECURITY PLAN - BLDG 113 SOUTH
1/8" = 1'-0"

three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot

Revisions:	Date

CONSULTANTS:

WPE #BR11046

WPE WEST PLAINS ENGINEERING, INC.
1750 RAND ROAD ▪ RAPID CITY, SD 57702
PHONE: (605) 348-7455 ▪ FAX: (605) 348-9445
www.westplainsengineering.com
RAPID CITY, SD ★ SIOUX FALLS, SD ★ CASPER, WY ★ CEDAR RAPIDS, IA

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 7595
MICHAEL RAYMOND SIOMAN
SOUTH DAKOTA
11/16/12

ARCHITECT/ENGINEERS:

FOURFRONT DESIGN INC
517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)

10.1749.008

Drawing Title: CCTV/ SECURITY PLAN - BLDG 113 SOUTH

Approved Project Director:

Project Title: CCTV Security Camera System REBID -

Location: Ft. Meade, South Dakota

Date: 11/16/12 | Checked: MRS | Drawn: VLS

Project Number: 568-12-103

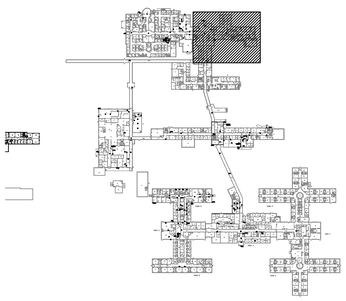
Building Number: 113

Drawing Number: E3.00 Dwg. 7 of 15

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231



KEYPLAN
NO SCALE

1 E4.00 CCTV/ SECURITY PLAN - BLDG 113 NORTH
1/8" = 1'-0"

MISCELLANEOUS ELECTRICAL NOTES:

A. CAMERA LOCATIONS ARE SHOWN APPROXIMATE. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL CAMERAS WITH OWNER PRIOR TO ANY WORK. CAMERAS MAY BE MOVED UP TO 20 FEET IN ANY DIRECTION.

B. DATA CABLING FROM EACH CAMERA LOCATION SHALL CONSIST OF CAT 5E CABLING IN A 3/4 INCH CONDUIT RAN BACK TO THE APPROPRIATE COMMUNICATIONS CLOSET INDICTED. EACH END SHALL BE TERMINATED FOR CONNECTION OF CAMERA TO THE SYSTEM. ALL CABLES WILL BE TERMINATED AT PATCH PANELS IN THE COMMUNICATIONS CLOSET. WIRING, FACEPLATES, AND JACKS SHALL MATCH VA STANDARD. COORDINATE WITH OWNER.

C. NO CONDUIT SHALL BE RUN EXPOSED IN FINISHED AREAS. CONTRACTOR TO USE WIREMOLD FOR POWER AND DATA WERE INDICATED.

SPECIFIC ELECTRICAL NOTES: (#)

1. EXISTING DOOR WITH CARD READER AND POSITION SWITCH BEING MONITORED AND CONTROLLED BY JOHNSON CONTROLS P2000 SECURITY SYSTEM.
2. MOUNT CAMERA TO FACE OF CANOPY.
3. PROVIDE 120V POWER AND 12V DC TRANSFORMER AT THIS LOCATION FOR HEATER/BLOWER POWER. POWER TO COME FROM PANEL E103.

three inches = one foot 6"
one and one half inches = one foot 1 6" 0
one inch = one foot 2 6" 0
three quarters inch = one foot 2 6" 0
one half inch = one foot 4 0
three eighths inch = one foot 4 0
one quarter inch = one foot 8 0
one eighth inch = one foot 16 8 4 0

Revisions:	Date

CONSULTANTS:

WPE #BR11046

WEST PLAINS ENGINEERING, INC.
1750 RAND ROAD • RAPID CITY, SD 57702
PHONE: (605) 348-7455 • FAX: (605) 348-9449
www.westplainsengineering.com
RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 7596
RAYMOND J. SIGMAN
SOUTH DAKOTA
11/16/12

ARCHITECT/ENGINEERS:

FOURFRONT DESIGN INC.
517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)
10.1749.008

Drawing Title: CCTV/ SECURITY PLAN - BLDG 113 NORTH
Approved: Project Director

Project Title: CCTV Security Camera System REBID -
Location: Ft. Meade, South Dakota
Date: 11/16/12 | Checked: MRS | Drawn: VLS

Project Number: 568-12-103
Building Number: 113
Drawing Number: E4.00
Dwg. 8 of 15

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231

1 E5.00 CCTV/ SECURITY PLAN - BLDG 146 WEST AND BLDG 145 SOUTH
1/8" = 1'-0"

KEYPLAN
NO SCALE

MISCELLANEOUS ELECTRICAL NOTES:

A. CAMERA LOCATIONS ARE SHOWN APPROXIMATE. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL CAMERAS WITH OWNER PRIOR TO ANY WORK. CAMERAS MAY BE MOVED UP TO 20 FEET IN ANY DIRECTION.

B. data cabling from each camera location shall consist of cat 5e cabling in a 3/4 inch conduit ran back to the appropriate communications closet indicted. Each end shall be terminated for connection of camera to the system. All cables will be terminated at patch panels in the COMMUNICATIONS Closet. WIRING, FACEPLATES, AND JACKS SHALL MATCH va STANDARD. COORDINATE WITH OWNER.

C. NO CONDUIT SHALL BE RUN EXPOSED IN FINISHED AREAS. CONTRACTOR TO USE WIREMOLD FOR POWER AND DATA WERE INDICATED.

SPECIFIC ELECTRICAL NOTES: (#)

1. EXISTING DOOR WITH CARD READER AND POSITION SWITCH BEING MONITORED AND CONTROLLED BY JOHNSON CONTROLS P2000 SECURITY SYSTEM.
2. MOUNT CAMERA ON CORNER OF BUILDING TO PROVIDE 360 DEGREE VIEW DOWN BOTH SIDES OF THE BUILDING AND AWAY FROM BUILDING.
3. PROVIDE 120V POWER AND 12V DC TRANSFORMER AT THIS LOCATION FOR HEATER/BLOWER POWER. POWER TO COME FROM PANEL 146EM SHEET E6.00.
4. CONTRACTOR TO PROVIDE DATA OUTLET AT THIS LOCATION WITH TWO CAT 5E CABLES BACK TO DATA RACK IN CLOSET 117. CABLES SHALL BE TERMINATED ON EACH END. PROVIDE FOUR PORT IVORY FACEPLATE WITH RJ-45 JACKS. WIRING, FACEPLATE AND JACKS SHALL MATCH VA STANDARD. PROVIDE COMPUTER EQUAL TO THE FOLLOWING: CONVERTIBLE CASE FOR DESKTOP OR TOWER USE; 1-CORE I7 2600 3.4GHZ PROCESSOR WITH 8MB CACHE, 1333MHz MEMORY; 4GB RAM; 1-3.5" 7200RPM SATA 500GB HARD DRIVE; DVD±RW (±R DL) / DVD-RAM; NVIDIA QUADRO 600; GIGABIT ETHERNET CONNECTION; 1GB DUAL PORT VIDEO CARD; WINDOWS 7 ENTERPRISE 64 BIT. PROVIDE NEW DESK TOP 22" MONITOR. PROVIDE CONNECTION OF NEW MONITOR TO CCTV SYSTEM BY WAY OF NEW COMPUTER. PROVIDE MILESTONE SMART CLIENT ON COMPUTER AND SET UP VIEWS AS REQUIRED.
5. MOUNT CAMERA ON FACE OF SOFFIT OVER TRAY LINE. CAMERA SHALL FACE FORWARD TO VIEW ENTIRE ROOM.

Revisions:	Date

CONSULTANTS:

WPE #BR11046

WEST PLAINS ENGINEERING, INC.
1750 RAND ROAD • RAPID CITY, SD 57702
PHONE: (605) 348-7455 • FAX: (605) 348-9445
www.westplainsengineering.com
RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 7595
MICHAEL RAYMOND SIGMAN
SOUTH DAKOTA
11/16/12

ARCHITECT/ENGINEERS:

FOURFRONT DESIGN INC.
517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)

10.1749.008

Drawing Title: CCTV/ SECURITY PLAN - BLDG 146 WEST AND BLDG 145 SOUTH

Approved: Project Director

Project Title: CCTV Security Camera System REBID
-

Location: Ft. Meade, South Dakota

Date: 11/16/12 | Checked: MRS | Drawn: VLS

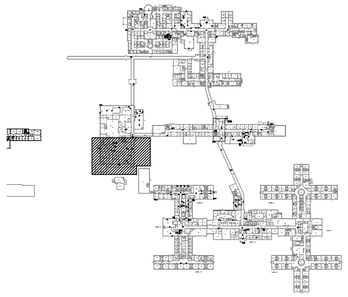
Project Number: 568-12-103

Building Number: 146

Drawing Number: E5.00
Dwg. 9 of 15

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231



KEYPLAN
NO SCALE

1 E6.00 CCTV/ SECURITY PLAN - BLDG 146 EAST
1/8" = 1'-0"

MISCELLANEOUS ELECTRICAL NOTES:

A. CAMERA LOCATIONS ARE SHOWN APPROXIMATE. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL CAMERAS WITH OWNER PRIOR TO ANY WORK. CAMERAS MAY BE MOVED UP TO 20 FEET IN ANY DIRECTION.

B. DATA CABLING FROM EACH CAMERA LOCATION SHALL CONSIST OF CAT 5E CABLING IN A 3/4 INCH CONDUIT RAN BACK TO THE APPROPRIATE COMMUNICATIONS CLOSET INDICTED. EACH END SHALL BE TERMINATED FOR CONNECTION OF CAMERA TO THE SYSTEM. ALL CABLES WILL BE TERMINATED AT PATCH PANELS IN THE COMMUNICATIONS CLOSET. WIRING, FACEPLATES, AND JACKS SHALL MATCH VA STANDARD. COORDINATE WITH OWNER.

C. NO CONDUIT SHALL BE RUN EXPOSED IN FINISHED AREAS. CONTRACTOR TO USE WIREMOLD FOR POWER AND DATA WERE INDICATED.

SPECIFIC ELECTRICAL NOTES: (#)

1. EXISTING DOOR WITH CARD READER AND POSITION SWITCH BEING MONITORED AND CONTROLLED BY JOHNSON CONTROLS P2000 SECURITY SYSTEM.
2. MOUNT CAMERA TO FACE OF BUILDING.
3. PROVIDE 120V POWER AND 12V DC TRANSFORMER AT THIS LOCATION FOR HEATER/BLOWER POWER. POWER TO COME FROM PANEL 146EM.
4. ALL CAT 5E CABLE FOR CAMERAS SHOWN ON SHEETS E5.00 AND E6.00 TO BE RUN BACK TO THIS CLOSET. CONTRACTOR TO PROVIDE A NEW CISCO CATALYST 3750 48 PORT VERSION 2 POE SWITCH IN EXISTING COMMUNICATIONS RACK. PROVIDE POWER FROM PANEL 146EM. CONTRACTOR MAY USE EXISTING 20A/1P BREAKER IN SPACE 2 FOR POWER FOR HEATER/BLOWER TRANSFORMERS.

Revisions	Date

CONSULTANTS:

WPE #BR11046

WPE WEST PLAINS ENGINEERING, INC.
1750 RAND ROAD • RAPID CITY, SD 57702
PHONE: (605) 348-7455 • FAX: (605) 348-9445
www.westplainsengineering.com
RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 7595
MICHAEL RAYMOND SIGMAN
SOUTH DAKOTA
11/16/12

ARCHITECT/ENGINEERS:

FOURFRONT DESIGN INC

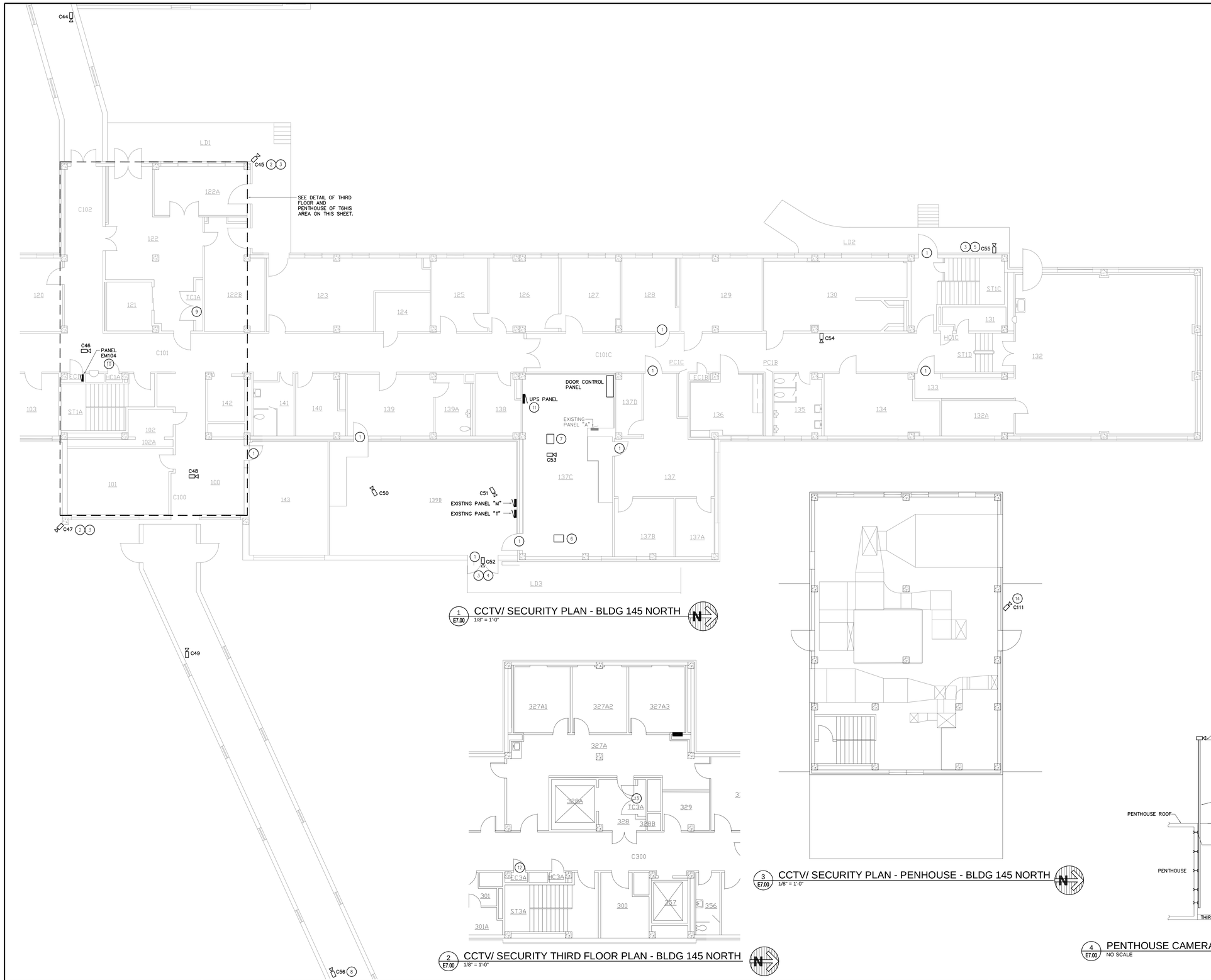
517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)

10.1749.008

Drawing Title	CCTV/ SECURITY PLAN - BLDG 146 EAST
Approved: Project Director	
Project Title	CCTV Security Camera System REBID -
Location	Ft. Meade, South Dakota
Date	11/16/12
Checked	MRS
Drawn	VLS
Project Number	568-12-103
Building Number	146
Drawing Number	E6.00
	Dwg. 10 of 15

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231

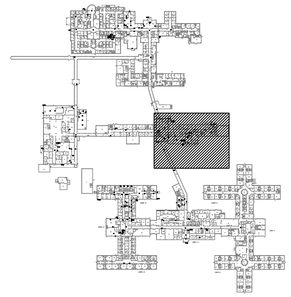


1 E7.00 CCTV/ SECURITY PLAN - BLDG 145 NORTH
1/8" = 1'-0"

2 E7.00 CCTV/ SECURITY THIRD FLOOR PLAN - BLDG 145 NORTH
1/8" = 1'-0"

3 E7.00 CCTV/ SECURITY PLAN - PENHOUSE - BLDG 145 NORTH
1/8" = 1'-0"

4 E7.00 PENTHOUSE CAMERA MOUNTING DETAIL
NO SCALE



KEYPLAN
NO SCALE

MISCELLANEOUS ELECTRICAL NOTES:

A. CAMERA LOCATIONS ARE SHOWN APPROXIMATE. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL CAMERAS WTH OWNER PRIOR TO ANY WORK. CAMERAS MAY BE MOVED UP TO 20 FEET IN ANY DIRECTION.

B. data cabling from each camera location shall consist of cat 5e cabling in a 3/4 inch conduit ran back to the appropriate communications closet indicted. Each end shall be terminated for connection of camera to the system. All cables will be terminated at patch panels in the COMMUNICATIONS Closet. WIRING, FACEPLATES, AND JACKS SHALL MATCH va STANDARD. COORDINATE WITH OWNER.

C. NO CONDUIT SHALL BE RUN EXPOSED IN FINISHED AREAS. CONTRACTOR TO USE WIREMOLD FOR POWER AND DATA WERE INDICATED.

SPECIFIC ELECTRICAL NOTES: (#)

1. EXISTING DOOR WITH CARD READER AND POSITION SWITCH BEING MONITORED AND CONTROLLED BY JOHNSON CONTROLS P2000 SECURITY SYSTEM.
2. MOUNT CAMERA ON CORNER OF BUILDING TO PROVIDE 360 DEGREE VIEW DOWN BOTH SIDES OF THE BUILDING AND AWAY FROM BUILDING.
3. PROVIDE 120V POWER AND 12V DC TRANSFORMER AT THIS LOCATION FOR HEATER/BLOWER POWER. POWER TO COME FROM PANEL EM104.
4. MOUNT CAMERA ON BUILDING WALL OVER DOOR AS HIGH AS POSSIBLE.
5. MOUNT CAMERA ON BUILDING WALL.
6. APPROXIMATE LOCATION OF FIBER TERMINATIONS FROM REMOTE COMMUNICATION CLOSETS.
7. APPROXIMATE LOCATION OF NEW RACK FOR VIDEO MANAGEMENT SERVER, RECORDING SERVERS AND SAN STORAGE SYSTEM. CONTRACTOR SHALL PROVIDE 17" FLAT SCREEN MONITOR, STANDARD KEYBOARD AND MOUSE FOR INTERFACE WITH HEAD END EQUIPMENT. CONTRACTOR TO ALSO PROVIDE AN 8-PORT KEYBOARD, VIDEO, MOUSE (KVM) SWITCH TO ALLOW THESE ITEMS TO INTERFACE THE SERVER AND STORAGE SYSTEMS. KVM SHALL BE RACK MOUNTED WITHIN THIS RACK.
8. MOUNT NEW CAMERA APPROXIMATELY HALF WAY DOWN CONNECTING CORRIDOR BETWEEN BUILDING 145 AND 148. COORDINATE LOCATION WITH OWNER.
9. ALL CAT 5E CABLE FOR CAMERAS SHOWN ON SHEET E7.00 TO BE RUN BACK TO THIS ROOM. CONTRACTOR TO PROVIDE A NEW CISCO CATALYST 3750 48 PORT VERSION 2 POE SWITCH IN EXISTING COMMUNICATIONS RACK.
10. PROVIDE POWER FROM PANEL EM104. PANEL EM104 HAS A SPARE 20A/1P BREAKER IN SPACE 13. PROVIDE POWER TO HEATER/BLOWER TRANSFORMERS SHOWN ON THIS SHEET FROM THIS BREAKER.
11. PROVIDE POWER FROM UPS PANEL FOR NEW VIDEO MANAGEMENT SERVER, RECORDING SERVERS AND SAN STORAGE SYSTEM FROM THIS PANEL. THIS PANEL IS A GE A-SERIES PANEL, CATALOG NO. AQF3442ATX, 120/208V/3-PH/4-WIRE USING TYPE THQB BREAKERS. SPACES 2,4 AND 6,8 HAVE SPARE 30A/2P BREAKERS. CONTRACTOR TO REMOVE AND REPLACE WITH APPROPRIATE BREAKERS TO FEED NEW EQUIPMENT.
12. PROVIDE POWER FROM PANEL LOCATED IN THIS CLOSET TO NEW CAMERA LOCATED ABOVE PENTHOUSE. PROVIDE A NEW 20A/1P BREAKER IN THIS PANEL FOR POWER TO THE HEATER/BLOWER TRANSFORMER.
13. THE CAT 5E CABLE FROM THE CAMERA LOCATED ABOVE THE PENTHOUSE SHALL BE RUN TO THE EXISTING POE SWITCH LOCATED IN THIS COMMUNICATIONS CLOSET.
14. CONTRACTOR TO INSTALL A NEW PTZ CAMERA ABOVE THE PENTHOUSE. CONTRACTOR SHALL MOUNT THE NEW CAMERA ON A 3" PIECE OF RIGID METAL CONDUIT THAT SHALL EXTEND 10 FEET ABOVE THE EXISTING PENTHOUSE ROOF. CONTRACTOR SHALL PROVIDE ALL MATERIALS NECESSARY TO MOUNT THE CAMERA ON THE TOP OF THIS 3" CONDUIT THAT WILL ACT AS A POST. THE CONDUIT SHALL BE RIGIDLY MOUNTED TO THE SIDE OF THE BUILDING AS DETAILED. THE PENTHOUSE EXTENDS ONE LEVEL ABOVE THE THIRD FLOOR AT THIS LOCATION. CONTRACTOR SHALL DRIVE POWER FROM EXISTING ELECTRICAL PANEL IN ELECTRICAL CLOSET INDICATED IN NOTE 12. THE TRANSFORMER FOR THE HEATER/BLOWER SHALL BE INSTALLED IN THE PENTHOUSE AND THEN POWER WILL EXTEND FROM THE TRANSFORMER TO THE CAMERA. ALL CABLES AND WIRING TO THE CAMERA FROM THE PENTHOUSE SHALL BE IN RIGID STEEL CONDUIT. CONDUIT SHALL BE SEALED TO PREVENT MOISTURE FROM ENTERING THE BUILDING IN ANY WAY. CONTRACTOR SHALL COORDINATE FINAL MOUNTING LOCATION ON PENTHOUSE WITH OWNER TO ENSURE PROPER COVERAGE OF AREA AROUND THE CAMPUS. CONTRACTOR SHALL MOUNT ON CAMERA ANYWHERE THAT OWNER DESIRES ON THIS PENTHOUSE WITHOUT ADDITIONAL CONSTRUCTION COSTS.

Revisions:	Date

CONSULTANTS:

WPE #BR11046

WEST PLAINS ENGINEERING, INC.
1750 RAND ROAD • RAPID CITY, SD 57702
PHONE: (605) 348-7455 • FAX: (605) 348-9445
www.westplainsengineering.com
RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 7595
MICHAEL RAYMOND SIOMAN
SOUTH DAKOTA
11/15/12

ARCHITECT/ENGINEERS:

FOURFRONT DESIGN INC
517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)
10.1749.008

Drawing Title: CCTV/ SECURITY PLAN - BLDG 145 NORTH

Approved: Project Director

Project Title: CCTV Security Camera System REBID -

Location: Ft. Meade, South Dakota

Date: 11/16/12 | Checked: MRS | Drawn: VLS

Project Number: 568-12-103

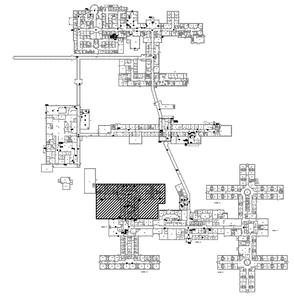
Building Number: 145

Drawing Number: E7.00 Dwg. 11 of 15

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231



KEYPLAN
NO SCALE

1 E8.00 CCTV/ SECURITY PLAN - BLDG 148 SOUTHWEST
1/8" = 1'-0"

MISCELLANEOUS ELECTRICAL NOTES:

A. CAMERA LOCATIONS ARE SHOWN APPROXIMATE. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL CAMERAS WITH OWNER PRIOR TO ANY WORK. CAMERAS MAY BE MOVED UP TO 20 FEET IN ANY DIRECTION.

B. data cabling from each camera location shall consist of cat 5e cabling in a 3/4 inch conduit ran back to the appropriate communications closet indicted. Each end shall be terminated for connection of camera to the system. All cables will be terminated at patch panels in the COMMUNICATIONS Closet. WIRING, FACEPLATES, AND JACKS SHALL MATCH va STANDARD. COORDINATE WITH OWNER.

C. NO CONDUIT SHALL BE RUN EXPOSED IN FINISHED AREAS. CONTRACTOR TO USE WIREMOLD FOR POWER AND DATA WERE INDICATED.

SPECIFIC ELECTRICAL NOTES: (#)

1. EXISTING DOOR WITH CARD READER AND POSITION SWITCH BEING MONITORED AND CONTROLLED BY JOHNSON CONTROLS P2000 SECURITY SYSTEM.
2. MOUNT CAMERA ON BUILDING WALL.
3. PROVIDE 120V POWER AND 12V DC TRANSFORMER AT THIS LOCATION FOR HEATER/BLOWER POWER.
4. CONTRACTOR TO PROVIDE DATA OUTLET AT THIS LOCATION WITH TWO CAT 5E CABLES BACK TO DATA RACK IN CLOSET CEC1. CABLES SHALL BE TERMINATED ON EACH END. PROVIDE FOUR PORT IVORY FACEPLATE WITH RJ-45 JACKS. WIRING, FACEPLATE AND JACKS SHALL MATCH VA STANDARD. PROVIDE COMPUTER EQUAL TO THE FOLLOWING: CONVERTIBLE CASE FOR DESKTOP OR TOWER USE; 1-CORE I7 2600 3.4GHZ PROCESSOR WITH 8MB CACHE, 1333MHz MEMORY; 4GB RAM; 1-3.5" 7200RPM SATA 500GB HARD DRIVE; DVD±RW (±R DL) / DVD-RAM; NVIDIA QUADRO 600; GIGABIT ETHERNET CONNECTION; 1GB DUAL PORT VIDEO CARD; WINDOWS 7 ENTERPRISE 64 BIT. PROVIDE NEW DESK TOP 22" MONITOR. PROVIDE CONNECTION OF NEW MONITOR TO CCTV SYSTEM BY WAY OF NEW COMPUTER. PROVIDE MILESTONE SMART CLIENT ON COMPUTER AND SET UP VIEWS AS REQUIRED. CAMERAS C57, C58, C59 AND C60 NEED TO BE VIEWED AT THIS LOCATION.
5. CONTRACTOR TO PROVIDE DATA OUTLET AT THIS LOCATION WITH TWO CAT 5E CABLES BACK TO DATA RACK IN CLOSET CEC1. CABLES SHALL BE TERMINATED ON EACH END. PROVIDE FOUR PORT IVORY FACEPLATE WITH RJ-45 JACKS. WIRING, FACEPLATE AND JACKS SHALL MATCH VA STANDARD. PROVIDE COMPUTER EQUAL TO THE FOLLOWING: CONVERTIBLE CASE FOR DESKTOP OR TOWER USE; 1-CORE I7 2600 3.4GHZ PROCESSOR WITH 8MB CACHE, 1333MHz MEMORY; 4GB RAM; 1-3.5" 7200RPM SATA 500GB HARD DRIVE; DVD±RW (±R DL) / DVD-RAM; NVIDIA QUADRO 600; GIGABIT ETHERNET CONNECTION; 1GB DUAL PORT VIDEO CARD; WINDOWS 7 ENTERPRISE 64 BIT. PROVIDE NEW DESK TOP 32" MONITOR. PROVIDE CONNECTION OF NEW MONITOR TO CCTV SYSTEM BY WAY OF NEW COMPUTER. PROVIDE MILESTONE SMART CLIENT ON COMPUTER AND SET UP VIEWS AS REQUIRED.
6. PROVIDE NEW 26" MONITOR WITH WALL MOUNTING BRACKET. PROVIDE FOR CONNECTION OF NEW MONITOR TO CCTV SYSTEM BY WAY OF NEW COMPUTER OUTLINED IN SPECIFIC NOTE 5 ABOVE.
7. MOUNT CAMERA ON BUILDING WALL.
8. PROVIDE POWER FROM PANEL LX-2. THIS PANEL IS A SQUARE D SERIES E2 PANEL, CATALOG NO. NQOD442L225CU, 120/208V/3-PH/4-WIRE USING 10KAIC BREAKERS. CONTRACTOR TO PROVIDE NEW 20A/1P BREAKER IN SPACE 33. PROVIDE POWER TO HEATER/BLOWER TRANSFORMERS SHOWN ON THIS SHEET AND SHEET E9.00 FROM THIS BREAKER.

Revisions	Date

CONSULTANTS:

WPE #BR11046

WEST PLAINS ENGINEERING, INC.
1750 RAND ROAD • RAPID CITY, SD 57702
PHONE: (605) 348-7455 • FAX: (605) 348-9445
www.westplainsengineering.com
RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 7595
MICHAEL RAYMOND SIGMAN
NORTH DAKOTA
11/16/12

ARCHITECT/ENGINEERS:

FOURFRONT DESIGN INC

517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)

10.1749.008

Drawing Title: CCTV/ SECURITY PLAN - BLDG 148 SOUTHWEST

Approved: Project Director

Project Title: CCTV Security Camera System REBID -

Location: Ft. Meade, South Dakota

Date: 11/16/12 | Checked: MRS | Drawn: VLS

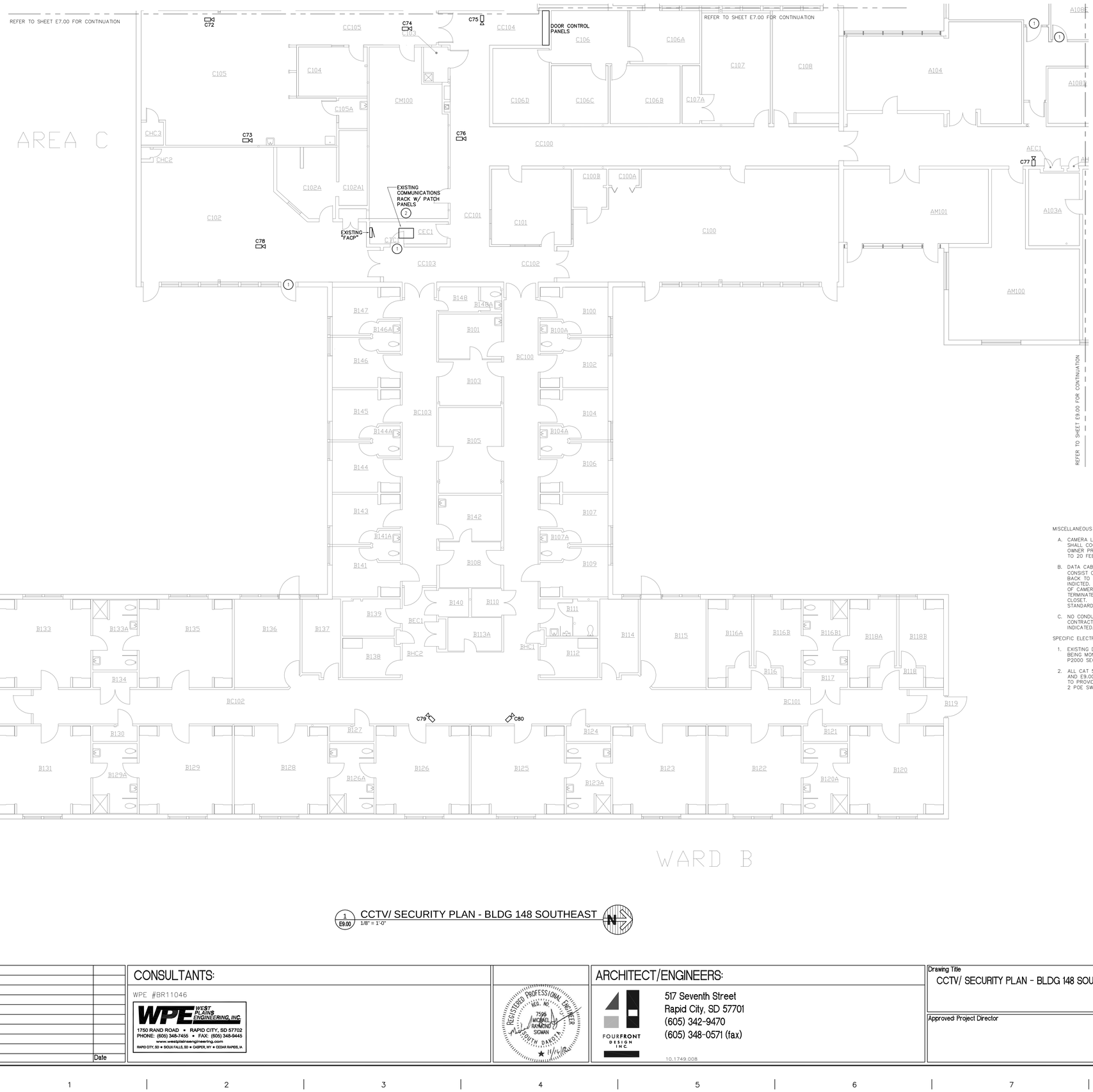
Project Number: 568-12-103

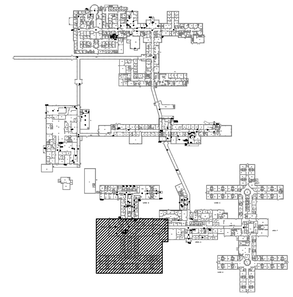
Building Number: 148

Drawing Number: E8.00
Dwg. 12 of 15

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231





KEYPLAN
NO SCALE

MISCELLANEOUS ELECTRICAL NOTES:

A. CAMERA LOCATIONS ARE SHOWN APPROXIMATE. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL CAMERAS WITH OWNER PRIOR TO ANY WORK. CAMERAS MAY BE MOVED UP TO 20 FEET IN ANY DIRECTION.

B. DATA CABLING FROM EACH CAMERA LOCATION SHALL CONSIST OF CAT 5E CABLING IN A 3/4 INCH CONDUIT RAN BACK TO THE APPROPRIATE COMMUNICATIONS CLOSET INDICTED. EACH END SHALL BE TERMINATED FOR CONNECTION OF CAMERA TO THE SYSTEM. ALL CABLES WILL BE TERMINATED AT PATCH PANELS IN THE COMMUNICATIONS CLOSET. WIRING, FACEPLATES, AND JACKS SHALL MATCH VA STANDARD. COORDINATE WITH OWNER.

C. NO CONDUIT SHALL BE RUN EXPOSED IN FINISHED AREAS. CONTRACTOR TO USE WIREMOLD FOR POWER AND DATA WERE INDICATED. (#)

SPECIFIC ELECTRICAL NOTES:

1. EXISTING DOOR WITH CARD READER AND POSITION SWITCH BEING MONITORED AND CONTROLLED BY JOHNSON CONTROLS P2000 SECURITY SYSTEM.

2. ALL CAT 5E CABLE FOR CAMERAS SHOWN ON SHEETS E8.00 AND E9.00 TO BE RUN BACK TO THIS CLOSET. CONTRACTOR TO PROVIDE A NEW CISCO CATALYST 3750 48 PORT VERSION 2 POE SWITCH IN EXISTING COMMUNICATIONS RACK.

1 / E9.00 CCTV/ SECURITY PLAN - BLDG 148 SOUTHEAST
1/8" = 1'-0"

N

three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot

Revisions	Date

CONSULTANTS:

WPE #BR11046

WPE WEST PLAINS ENGINEERING, INC.
1750 RAND ROAD ▪ RAPID CITY, SD 57702
PHONE: (605) 348-7455 ▪ FAX: (605) 348-9445
www.westplainsengineering.com
RAPID CITY, SD ▪ SIOUX FALLS, SD ▪ CASPER, WY ▪ CEDAR RAPIDS, IA

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 7595
MICHAEL RAYMOND SIGMAN
SOUTH DAKOTA
11/16/12

ARCHITECT/ENGINEERS:

FOURFRONT DESIGN INC
517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)

10.1749.008

Drawing Title: CCTV/ SECURITY PLAN - BLDG 148 SOUTHEAST

Approved: Project Director

Project Title: CCTV Security Camera System REBID -

Location: Ft. Meade, South Dakota

Date: 11/16/12 | Checked: MRS | Drawn: VLS

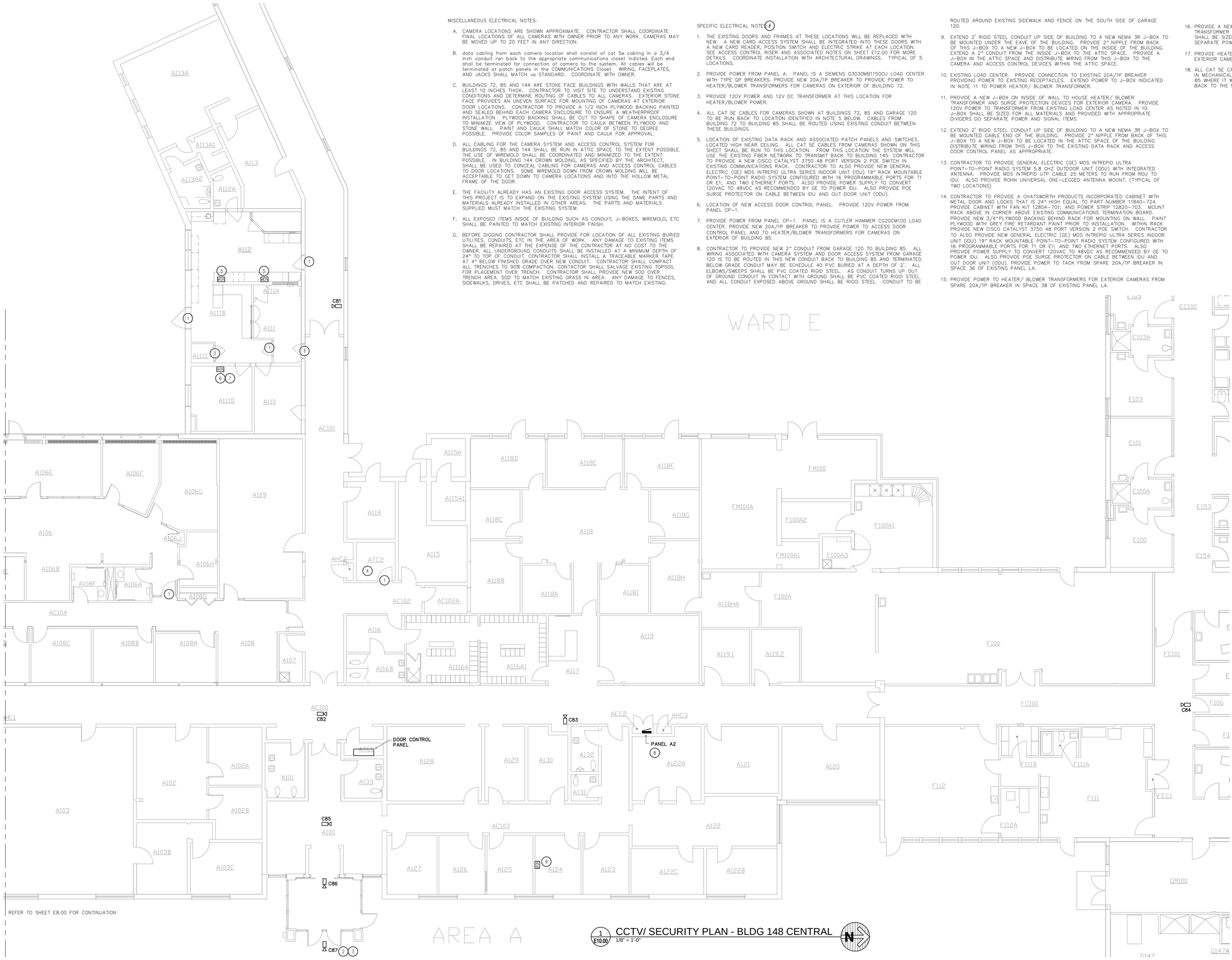
Project Number: 568-12-103

Building Number: 148

Drawing Number: E9.00
Dwg. 13 of 15

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231



1 E10.00 CCTV/ SECURITY PLAN - BLDG 148 CENTRAL
1/8" = 1'-0"

MISCELLANEOUS ELECTRICAL NOTES:

A. CAMERA LOCATIONS ARE SHOWN APPROXIMATE. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL CAMERAS WITH OWNER PRIOR TO ANY WORK. CAMERAS MAY BE MOVED UP TO 20 FEET IN ANY DIRECTION.

B. data cabling from each camera location shall consist of cat 5e cabling in a 3/4 inch conduit run back to the appropriate communications closet indicted. Each end shall be terminated for connection of camera to the system. All cables will be terminated at patch panels in the COMMUNICATIONS Closet. WIRING, FACEPLATES, AND JACKS SHALL MATCH va STANDARD. COORDINATE WITH OWNER.

C. BUILDINGS 72, 85 AND 144 ARE STONE FACE BUILDINGS WITH WALLS THAT ARE AT LEAST 10 INCHES THICK. CONTRACTOR TO VISIT SITE TO UNDERSTAND EXISTING CONDITIONS AND DETERMINE ROUTING OF CABLES TO ALL CAMERAS. EXTERIOR STONE FACE PROVIDES AN UNEVEN SURFACE FOR MOUNTING OF CAMERAS AT EXTERIOR DOOR LOCATIONS. CONTRACTOR TO PROVIDE A 1/2 INCH PLYWOOD BACKING PAINTED AND SEALED BEHIND EACH CAMERA ENCLOSURE TO ENSURE A WEATHERPROOF INSTALLATION. PLYWOOD BACKING SHALL BE CUT TO SHAPE OF CAMERA ENCLOSURE TO MINIMIZE VIEW OF PLYWOOD. CONTRACTOR TO CAULK BETWEEN PLYWOOD AND STONE WALL. PAINT AND CAULK SHALL MATCH COLOR OF STONE TO DEGREE POSSIBLE. PROVIDE COLOR SAMPLES OF PAINT AND CAULK FOR APPROVAL.

D. ALL CABLING FOR THE CAMERA SYSTEM AND ACCESS CONTROL SYSTEM FOR BUILDINGS 72, 85 AND 144 SHALL BE RUN IN ATTIC SPACE TO THE EXTENT POSSIBLE. THE USE OF WIREMOLD SHALL BE COORDINATED AND MINIMIZED TO THE EXTENT POSSIBLE. IN BUILDING 144 CROWN MOLDING, AS SPECIFIED BY THE ARCHITECT, SHALL BE USED TO CONCEAL CABLING FOR CAMERAS AND ACCESS CONTROL CABLES TO DOOR LOCATIONS. SOME WIREMOLD DOWN FROM CROWN MOLDING WILL BE ACCEPTABLE TO GET DOWN TO CAMERA LOCATIONS AND INTO THE HOLLOW METAL FRAME OF THE DOOR.

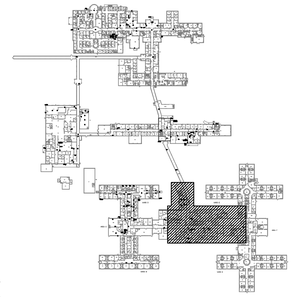
E. THE FACILITY ALREADY HAS AN EXISTING DOOR ACCESS SYSTEM. THE INTENT OF THIS PROJECT IS TO EXPAND ON THE EXISTING SYSTEM USING THE SAME PARTS AND MATERIALS ALREADY INSTALLED IN OTHER AREAS. THE PARTS AND MATERIALS SUPPLIED MUST MATCH THE EXISTING SYSTEM.

F. ALL EXPOSED ITEMS INSIDE OF BUILDING SUCH AS CONDUIT, J-BOXES, WIREMOLD, ETC SHALL BE PAINTED TO MATCH EXISTING INTERIOR FINISH.

G. BEFORE DIGGING CONTRACTOR SHALL PROVIDE FOR LOCATION OF ALL EXISTING BURIED UTILITIES, CONDUITS, ETC IN THE AREA OF WORK. ANY DAMAGE TO EXISTING ITEMS SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR AT NO COST TO THE OWNER. ALL UNDERGROUND CONDUITS SHALL BE INSTALLED AT A MINIMUM DEPTH OF 24" TO TOP OF CONDUIT. CONTRACTOR SHALL INSTALL A TRACEABLE MARKER TAPE AT 4" BELOW FINISHED GRADE OVER NEW CONDUIT. CONTRACTOR SHALL COMPACT ALL TRENCHES TO 90% COMPACTION. CONTACTOR SHALL SALVAGE EXISTING TOPSOIL FOR PLACEMENT OVER TRENCH. CONTRACTOR SHALL PROVIDE NEW SOD OVER TRENCH AREA. SOD TO MATCH EXISTING GRASS IN AREA. ANY DAMAGE TO FENCES, SIDEWALKS, DRIVES, ETC SHALL BE PATCHED AND REPAIRED TO MATCH EXISTING.

SPECIFIC ELECTRICAL NOTES:

1. THE EXISTING DOORS AND FRAMES AT THESE LOCATIONS WILL BE REPLACED WITH NEW. A NEW CARD ACCESS SYSTEM SHALL BE INTEGRATED INTO THESE DOORS WITH A NEW CARD READER, POSITION SWITCH AND ELECTRIC STRIKE AT EACH LOCATION; SEE ACCESS CONTROL RISER AND ASSOCIATED NOTES ON SHEET E12.00 FOR MORE DETAILS. COORDINATE INSTALLATION WITH ARCHITECTURAL DRAWINGS. TYPICAL OF 5 LOCATIONS.
2. PROVIDE POWER FROM PANEL A. PANEL IS A SIEMENS G3030MB1150CU LOAD CENTER WITH TYPE QP BREAKERS. PROVIDE NEW 20A/1P BREAKER TO PROVIDE POWER TO HEATER/BLOWER TRANSFORMERS FOR CAMERAS ON EXTERIOR OF BUILDING 72.
3. PROVIDE 120V POWER AND 12V DC TRANSFORMER AT THIS LOCATION FOR HEATER/BLOWER POWER.
4. ALL CAT 5E CABLES FOR CAMERAS SHOWN AT BUILDINGS 72, 85 AND GARAGE 120 TO BE RUN BACK TO LOCATION IDENTIFIED IN NOTE 5 BELOW. CABLES FROM BUILDING 72 TO BUILDING 85 SHALL BE ROUTED USING EXISTING CONDUIT BETWEEN THESE BUILDINGS.
5. LOCATION OF EXISTING DATA RACK AND ASSOCIATED PATCH PANELS AND SWITCHES. LOCATED HIGH NEAR CEILING. ALL CAT 5E CABLES FROM CAMERAS SHOWN ON THIS SHEET SHALL BE RUN TO THIS LOCATION. FROM THIS LOCATION THE SYSTEM WILL USE THE EXISTING FIBER NETWORK TO TRANSMIT BACK TO BUILDING 145. CONTRACTOR TO PROVIDE A NEW CISCO CATALYST 3750 48 PORT VERSION 2 POE SWITCH IN EXISTING COMMUNICATIONS RACK. CONTRACTOR TO ALSO PROVIDE NEW GENERAL ELECTRIC (GE) MDS INTREPID ULTRA SERIES INDOOR UNIT (IDU) 19" RACK MOUNTABLE POINT-TO-POINT RADIO SYSTEM CONFIGURED WITH 16 PROGRAMMABLE PORTS FOR T1 OR E1; AND TWO ETHERNET PORTS. ALSO PROVIDE POWER SUPPLY TO CONVERT 120VAC TO 48VDC AS RECOMMENDED BY GE TO POWER IDU. ALSO PROVIDE POE SURGE PROTECTOR ON CABLE BETWEEN IDU AND OUT DOOR UNIT (ODU).
6. LOCATION OF NEW ACCESS DOOR CONTROL PANEL. PROVIDE 120V POWER FROM PANEL CP-1.
7. PROVIDE POWER FROM PANEL CP-1. PANEL IS A CUTLER HAMMER CG20CM100 LOAD CENTER. PROVIDE NEW 20A/1P BREAKER TO PROVIDE POWER TO ACCESS DOOR CONTROL PANEL AND TO HEATER/BLOWER TRANSFORMERS FOR CAMERAS ON EXTERIOR OF BUILDING 85.
8. CONTRACTOR TO PROVIDE NEW 2" CONDUIT FROM GARAGE 120 TO BUILDING 85. ALL WIRING ASSOCIATED WITH CAMERA SYSTEM AND DOOR ACCESS SYSTEM FROM GARAGE 120 IS TO BE ROUTED IN THIS NEW CONDUIT BACK TO BUILDING 85 AND TERMINATED. BELOW GRADE CONDUIT MAY BE SCHEDULE 40 PVC BURIED AT A DEPTH OF 2'. ALL ELBOWS/SWEEPS SHALL BE PVC COATED RIGID STEEL. AS CONDUIT TURNS UP OUT OF GROUND CONDUIT IN CONTACT WITH GROUND SHALL BE PVC COATED RIGID STEEL AND ALL CONDUIT EXPOSED ABOVE GROUND SHALL BE RIGID STEEL. CONDUIT TO BE ROUTED AROUND EXISTING SIDEWALK AND FENCE ON THE SOUTH SIDE OF GARAGE 120.
9. EXTEND 2' RIGID STEEL CONDUIT UP SIDE OF BUILDING TO A NEW NEMA 3R J-BOX TO BE MOUNTED UNDER THE EAVE OF THE BUILDING. PROVIDE 2" NIPPLE FROM BACK OF THIS J-BOX TO A NEW J-BOX TO BE LOCATED ON THE INSIDE OF THE BUILDING. EXTEND A 2" CONDUIT FROM THE INSIDE J-BOX TO THE ATTIC SPACE. PROVIDE A J-BOX IN THE ATTIC SPACE AND DISTRIBUTE WIRING FROM THIS J-BOX TO THE CAMERA AND ACCESS CONTROL DEVICES WITHIN THE ATTIC SPACE.
10. EXISTING LOAD CENTER. PROVIDE CONNECTION TO EXISTING 20A/1P BREAKER PROVIDING POWER TO EXISTING RECEPTACLES. EXTEND POWER TO J-BOX INDICATED IN NOTE 11 TO POWER HEATER/ BLOWER TRANSFORMER.
11. PROVIDE A NEW J-BOX ON INSIDE OF WALL TO HOUSE HEATER/ BLOWER TRANSFORMER AND SURGE PROTECTION DEVICES FOR EXTERIOR CAMERA. PROVIDE 120V POWER TO TRANSFORMER FROM EXISTING LOAD CENTER AS NOTED IN 10. J-BOX SHALL BE SIZED FOR ALL MATERIALS AND PROVIDED WITH APPROPRIATE DIVIDERS DO SEPARATE POWER AND SIGNAL ITEMS.
12. EXTEND 2' RIGID STEEL CONDUIT UP SIDE OF BUILDING TO A NEW NEMA 3R J-BOX TO BE MOUNTED GABLE END OF THE BUILDING. PROVIDE 2" NIPPLE FROM BACK OF THIS J-BOX TO A NEW J-BOX TO BE LOCATED IN THE ATTIC SPACE OF THE BUILDING. DISTRIBUTE WIRING FROM THIS J-BOX TO THE EXISTING DATA RACK AND ACCESS DOOR CONTROL PANEL AS APPROPRIATE.
13. CONTRACTOR TO PROVIDE GENERAL ELECTRIC (GE) MDS INTREPID ULTRA POINT-TO-POINT RADIO SYSTEM 5.8 GHZ OUTDOOR UNIT (ODU) WITH INTEGRATED ANTENNA. PROVIDE MDS INTREPID UTP CABLE 25 METERS TO RUN FROM RDU TO IDU. ALSO PROVIDE ROHN UNIVERSAL ONE-LEGGED ANTENNA MOUNT. (TYPICAL OF TWO LOCATIONS)
14. CONTRACTOR TO PROVIDE A CHATSWORTH PRODUCTS INCORPORATED CABINET WITH METAL DOOR AND LOCKS THAT IS 24" HIGH EQUAL TO PART NUMBER 11840-724. PROVIDE CABINET WITH FAN KIT 12804-701; AND POWER STRIP 12820-703. MOUNT RACK ABOVE IN CORNER ABOVE EXISTING COMMUNICATIONS TERMINATION BOARD. PROVIDE NEW 3/4"-PLYWOOD BACKING BEHIND RACK FOR MOUNTING ON WALL. PAINT PLYWOOD WITH GREY FIRE RETARDANT PAINT PRIOR TO INSTALLATION. WITHIN RACK PROVIDE NEW CISCO CATALYST 3750 48 PORT VERSION 2 POE SWITCH. CONTRACTOR TO ALSO PROVIDE NEW GENERAL ELECTRIC (GE) MDS INTREPID ULTRA SERIES INDOOR UNIT (IDU) 19" RACK MOUNTABLE POINT-TO-POINT RADIO SYSTEM CONFIGURED WITH 16 PROGRAMMABLE PORTS FOR T1 OR E1; AND TWO ETHERNET PORTS. ALSO PROVIDE POWER SUPPLY TO CONVERT 120VAC TO 48VDC AS RECOMMENDED BY GE TO POWER IDU. ALSO PROVIDE POE SURGE PROTECTOR ON CABLE BETWEEN IDU AND OUT DOOR UNIT (ODU). PROVIDE POWER TO TACK FROM SPARE 20A/1P BREAKER IN SPACE 36 OF EXISTING PANEL LA.
15. PROVIDE POWER TO HEATER/ BLOWER TRANSFORMERS FOR EXTERIOR CAMERAS FROM SPARE 20A/1P BREAKER IN SPACE 38 OF EXISTING PANEL LA.
16. PROVIDE A NEW J-BOX ON INSIDE OF HOUSEKEEPING 117 TO HOUSE HEATER/BLOWER TRANSFORMER AND SURGE PROTECTION DEVICES FOR EXTERIOR CAMERA. J-BOX SHALL BE SIZED FOR ALL MATERIALS AND PROVIDED WITH APPROPRIATE DIVIDERS DO SEPARATE POWER AND SIGNAL ITEMS.
17. PROVIDE HEATER/BLOWER TRANSFORMER AND SURGE PROTECTION DEVICES FOR THIS EXTERIOR CAMERA INSIDE OF MECHANICAL 108.
18. ALL CAT 5E CABLES FOR CAMERAS IN BUILDINGS 144TO BE RUN BACK TO NEW RACK IN MECHANICAL 108. VIDEO DATA WILL THEN BE TRANSMITED BY RADIO TO BUILDING 85 WHERE IT WILL BE FORWARDED BY WAY OF THE EXISTING VA FIBER NETWORK BACK TO THE MAIN SERVER ROOM IN BUILDING 145.



KEYPLAN
NO SCALE

Revisions	Date

CONSULTANTS:

WPE #BR11046

WPE WEST PLAINS ENGINEERING, INC.
1750 RAND ROAD • RAPID CITY, SD 57702
PHONE: (605) 348-7455 • FAX: (605) 348-9445
www.westplainsengineering.com
RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 7596
MICHAEL RAYMOND SIGMAN
SOUTH DAKOTA
11/16/12

ARCHITECT/ENGINEERS:

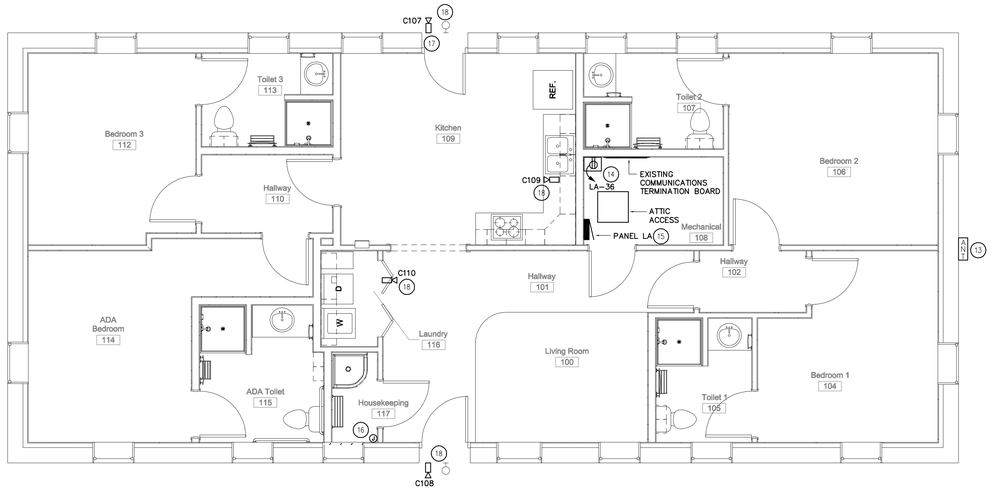
FOURFRONT DESIGN INC
517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)

10.1749.008

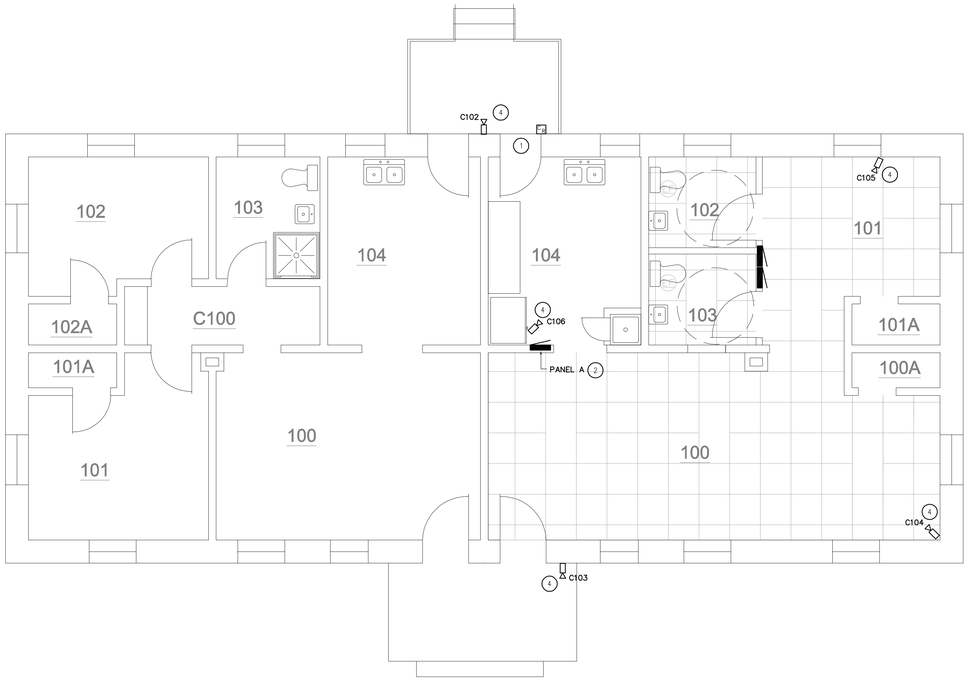
Drawing Title	CCTV/ SECURITY PLAN - BLDG 148 CENTRAL
Approved: Project Director	
Project Title	CCTV Security Camera System REBID -
Location	Ft. Meade, South Dakota
Date	11/16/12
Checked	MRS
Drawn	VLS
Project Number	568-12-103
Building Number	148
Drawing Number	E10.00
Dwg.	14 of 15

Office of Construction and Facilities Management
Department of Veterans Affairs

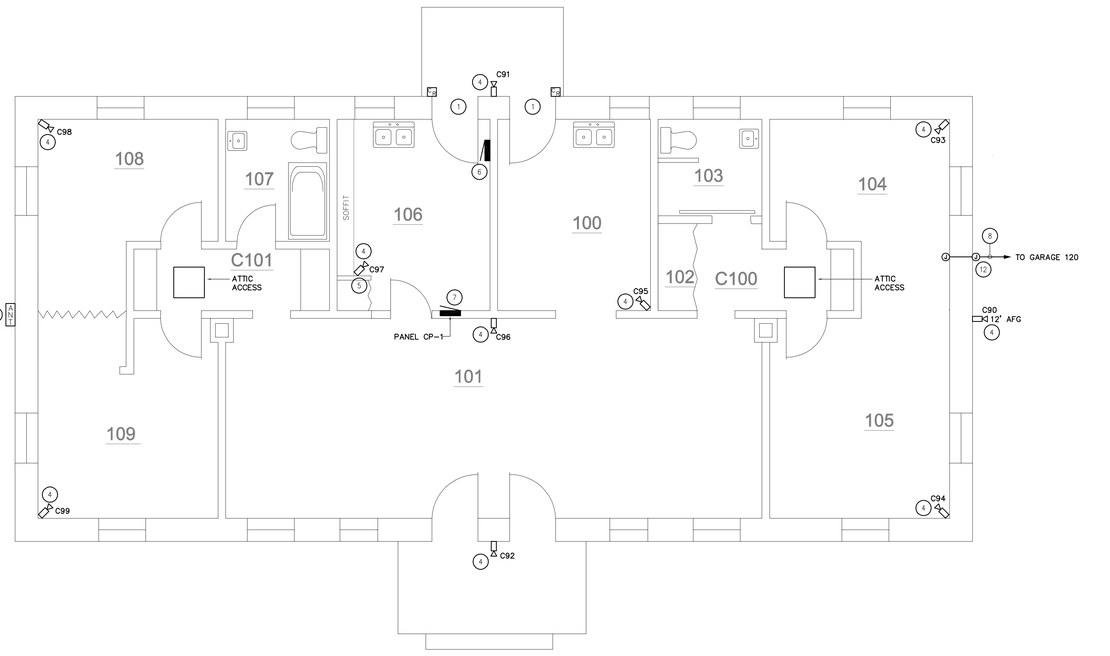
VA FORM 08-6231



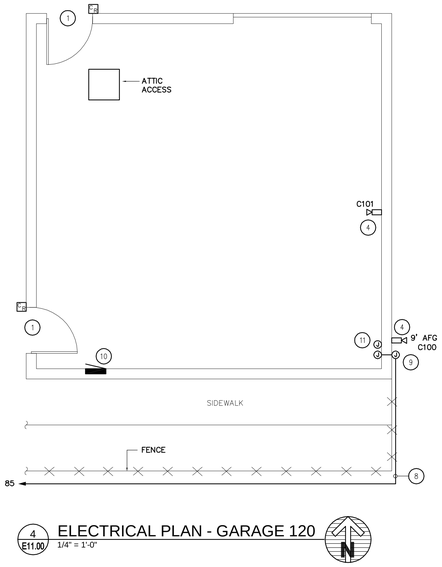
1 E11.00 ELECTRICAL PLAN - BUILDING 144
1/4" = 1'-0"



2 E11.00 ELECTRICAL PLAN - DAYCARE - BUILDING 72
1/4" = 1'-0"



3 E11.00 ELECTRICAL PLAN - BUILDING 85
1/4" = 1'-0"



4 E11.00 ELECTRICAL PLAN - GARAGE 120
1/4" = 1'-0"

MISCELLANEOUS ELECTRICAL NOTES:

A. CAMERA LOCATIONS ARE SHOWN APPROXIMATE. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL CAMERAS WITH OWNER PRIOR TO ANY WORK. CAMERAS MAY BE MOVED UP TO 20 FEET IN ANY DIRECTION.

B. DATA CABLING FROM EACH CAMERA LOCATION SHALL CONSIST OF CAT 5E CABLING IN A 3/4 INCH CONDUIT RAN BACK TO THE APPROPRIATE COMMUNICATIONS CLOSET INDICATED. EACH END SHALL BE TERMINATED FOR CONNECTION OF CAMERA TO THE SYSTEM. ALL CABLES WILL BE TERMINATED AT PATCH PANELS IN THE COMMUNICATIONS CLOSET. WIRING, FACEPLATES, AND JACKS SHALL MATCH VA STANDARD. COORDINATE WITH OWNER.

C. BUILDINGS 72, 85 AND 144 ARE STONE FACE BUILDINGS WITH WALLS THAT ARE AT LEAST 10 INCHES THICK. CONTRACTOR TO VISIT SITE TO UNDERSTAND EXISTING CONDITIONS AND DETERMINE ROUTING OF CABLES TO ALL CAMERAS. EXTERIOR STONE FACE PROVIDES AN UNEVEN SURFACE FOR MOUNTING OF CAMERAS AT EXTERIOR DOOR LOCATIONS. CONTRACTOR TO PROVIDE A 1/2 INCH PLYWOOD BACKING PAINTED AND SEALED BEHIND EACH CAMERA ENCLOSURE TO ENSURE A WEATHERPROOF INSTALLATION. PLYWOOD BACKING SHALL BE CUT TO SHAPE OF CAMERA ENCLOSURE TO MINIMIZE VIEW OF PLYWOOD. CONTRACTOR TO CAULK BETWEEN PLYWOOD AND STONE WALL. PAINT AND CAULK SHALL MATCH COLOR OF STONE TO DEGREE POSSIBLE. PROVIDE COLOR SAMPLES OF PAINT AND CAULK FOR APPROVAL.

D. ALL CABLING FOR THE CAMERA SYSTEM AND ACCESS CONTROL SYSTEM FOR BUILDINGS 72, 85 AND 144 SHALL BE RUN IN ATTIC SPACE TO THE EXTENT POSSIBLE. THE USE OF WIREMOLD SHALL BE COORDINATED AND MINIMIZED TO THE EXTENT POSSIBLE. IN BUILDING 144 CROWN MOLDING, AS SPECIFIED BY THE ARCHITECT, SHALL BE USED TO CONCEAL CABLING FOR CAMERAS AND ACCESS CONTROL CABLES TO DOOR LOCATIONS. SOME WIREMOLD DOWN FROM CROWN MOLDING WILL BE ACCEPTABLE TO GET DOWN TO CAMERA LOCATIONS AND INTO THE HOLLOW METAL FRAME OF THE DOOR.

E. THE FACILITY ALREADY HAS AN EXISTING DOOR ACCESS SYSTEM. THE INTENT OF THIS PROJECT IS TO EXPAND ON THE EXISTING SYSTEM USING THE SAME PARTS AND MATERIALS ALREADY INSTALLED IN OTHER AREAS. THE PARTS AND MATERIALS SUPPLIED MUST MATCH THE EXISTING SYSTEM.

F. ALL EXPOSED ITEMS INSIDE OF BUILDING SUCH AS CONDUIT, J-BOXES, WIREMOLD, ETC SHALL BE PAINTED TO MATCH EXISTING INTERIOR FINISH.

G. BEFORE DIGGING CONTRACTOR SHALL PROVIDE FOR LOCATION OF ALL EXISTING BURIED UTILITIES, CONDUITS, ETC IN THE AREA OF WORK. ANY DAMAGE TO EXISTING ITEMS SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR AT NO COST TO THE OWNER. ALL UNDERGROUND CONDUITS SHALL BE INSTALLED AT A MINIMUM DEPTH OF 24" TO TOP OF CONDUIT. CONTRACTOR SHALL INSTALL A TRACEABLE MARKER TAPE AT 4" BELOW FINISHED GRADE OVER NEW CONDUIT. CONTRACTOR SHALL COMPACT ALL TRENCHES TO 90% COMPACTION. CONTACTOR SHALL SALVAGE EXISTING TOPSOIL FOR PLACEMENT OVER TRENCH. CONTRACTOR SHALL PROVIDE NEW SOD OVER TRENCH AREA. SOD TO MATCH EXISTING GRASS IN AREA. ANY DAMAGE TO FENCES, SIDEWALKS, DRIVES, ETC SHALL BE PATCHED AND REPAIRED TO MATCH EXISTING.

SPECIFIC ELECTRICAL NOTES: (F)

1. THE EXISTING DOORS AND FRAMES AT THESE LOCATIONS WILL BE REPLACED WITH NEW. A NEW CARD ACCESS SYSTEM SHALL BE INTEGRATED INTO THESE DOORS WITH A NEW CARD READER, POSITION SWITCH AND ELECTRIC STRIKE AT EACH LOCATION. SEE ACCESS CONTROL RISER AND ASSOCIATED NOTES ON SHEET E12.00 FOR MORE DETAILS. COORDINATE INSTALLATION WITH ARCHITECTURAL DRAWINGS. TYPICAL OF 5 LOCATIONS.
2. PROVIDE POWER FROM PANEL A. PANEL IS A SIEMENS Q3030MB1150CU LOAD CENTER WITH TYPE QP BREAKERS. PROVIDE NEW 20A/1P BREAKER TO PROVIDE POWER TO HEATER/BLOWER TRANSFORMERS FOR CAMERAS ON EXTERIOR OF BUILDING 72.
3. PROVIDE 120V POWER AND 12V DC TRANSFORMER AT THIS LOCATION FOR HEATER/BLOWER POWER.
4. ALL CAT 5E CABLES FOR CAMERAS SHOWN AT BUILDINGS 72, 85 AND GARAGE 120 TO BE RUN BACK TO LOCATION IDENTIFIED IN NOTE 5 BELOW. CABLES FROM BUILDING 72 TO BUILDING 85 SHALL BE ROUTED USING EXISTING CONDUIT BETWEEN THESE BUILDINGS.
5. LOCATION OF EXISTING DATA RACK AND ASSOCIATED PATCH PANELS AND SWITCHES. LOCATED HIGH NEAR CEILING. ALL CAT 5E CABLES FROM CAMERAS SHOWN ON THIS SHEET SHALL BE RUN TO THIS LOCATION. FROM THIS LOCATION THE SYSTEM WILL USE THE EXISTING FIBER NETWORK TO TRANSMIT BACK TO BUILDING 145. CONTRACTOR TO PROVIDE A NEW CISCO CATALYST 3750 48 PORT VERSION 2 POE SWITCH IN EXISTING COMMUNICATIONS RACK. CONTRACTOR TO ALSO PROVIDE NEW GENERAL ELECTRIC (GE) MDS INTREPID ULTRA SERIES INDOOR UNIT (IDU) 19" RACK MOUNTABLE POINT-TO-POINT RADIO SYSTEM CONFIGURED WITH 16 PROGRAMMABLE PORTS FOR T1 OR E1; AND TWO ETHERNET PORTS. ALSO PROVIDE POWER SUPPLY TO CONVERT 120VAC TO 48VDC AS RECOMMENDED BY GE TO POWER IDU. ALSO PROVIDE POE SURGE PROTECTOR ON CABLE BETWEEN IDU AND OUT DOOR UNIT (ODU).
6. LOCATION OF NEW ACCESS DOOR CONTROL PANEL. PROVIDE 120V POWER FROM PANEL CP-1.
7. PROVIDE POWER FROM PANEL CP-1. PANEL IS A CUTLER HAMMER CC20CM100 LOAD CENTER. PROVIDE NEW 20A/1P BREAKER TO PROVIDE POWER TO ACCESS DOOR CONTROL PANEL AND TO HEATER/BLOWER TRANSFORMERS FOR CAMERAS ON EXTERIOR OF BUILDING 85.
8. CONTRACTOR TO PROVIDE NEW 2" CONDUIT FROM GARAGE 120 TO BUILDING 85. ALL WIRING ASSOCIATED WITH CAMERA SYSTEM AND DOOR ACCESS SYSTEM FROM GARAGE 120 IS TO BE ROUTED IN THIS NEW CONDUIT BACK TO BUILDING 85 AND TERMINATED. BELOW GRADE CONDUIT MAY BE SCHEDULE 40 PVC BURIED AT A DEPTH OF 2'. ALL ELBOWS/SWEEPS SHALL BE PVC COATED RIGID STEEL. AS CONDUIT TURNS UP OUT OF GROUND CONDUIT IN CONTACT WITH GROUND SHALL BE PVC COATED RIGID STEEL AND ALL CONDUIT EXPOSED ABOVE GROUND SHALL BE RIGID STEEL. CONDUIT TO BE ROUTED AROUND EXISTING SIDEWALK AND FENCE ON THE SOUTH SIDE OF GARAGE 120.
9. EXTEND 2" RIGID STEEL CONDUIT UP SIDE OF BUILDING TO A NEW NEMA 3R J-BOX TO BE MOUNTED UNDER THE EAVE OF THE BUILDING. PROVIDE 2" NIPPLE FROM BACK OF THIS J-BOX TO A NEW J-BOX TO BE LOCATED ON THE INSIDE OF THE BUILDING. EXTEND A 2" CONDUIT FROM THE INSIDE J-BOX TO THE ATTIC SPACE. PROVIDE A J-BOX IN THE ATTIC SPACE AND DISTRIBUTE WIRING FROM THIS J-BOX TO THE CAMERA AND ACCESS CONTROL DEVICES WITHIN THE ATTIC SPACE.
10. EXISTING LOAD CENTER. PROVIDE CONNECTION TO EXISTING 20A/1P BREAKER PROVIDING POWER TO EXISTING RECEPTACLES. EXTEND POWER TO J-BOX INDICATED IN NOTE 11 TO POWER HEATER/ BLOWER TRANSFORMER.
11. PROVIDE A NEW J-BOX ON INSIDE OF WALL TO HOUSE HEATER/ BLOWER TRANSFORMER AND SURGE PROTECTION DEVICES FOR EXTERIOR CAMERA. PROVIDE 120V POWER TO TRANSFORMER FROM EXISTING LOAD CENTER AS NOTED IN 10. J-BOX SHALL BE SIZED FOR ALL MATERIALS AND PROVIDED WITH APPROPRIATE DIVIDERS DO SEPARATE POWER AND SIGNAL ITEMS.
12. EXTEND 2" RIGID STEEL CONDUIT UP SIDE OF BUILDING TO A NEW NEMA 3R J-BOX TO BE MOUNTED CABLE END OF THE BUILDING. PROVIDE 2" NIPPLE FROM BACK OF THIS J-BOX TO A NEW J-BOX TO BE LOCATED IN THE ATTIC SPACE OF THE BUILDING. DISTRIBUTE WIRING FROM THIS J-BOX TO THE EXISTING DATA RACK AND ACCESS DOOR CONTROL PANEL AS APPROPRIATE.
13. CONTRACTOR TO PROVIDE GENERAL ELECTRIC (GE) MDS INTREPID ULTRA POINT-TO-POINT RADIO SYSTEM 5.8 GHZ OUTDOOR UNIT (ODU) WITH INTEGRATED ANTENNA. PROVIDE MDS INTREPID UTP CABLE 25 METERS TO RUN FROM RDU TO IDU. ALSO PROVIDE ROHN UNIVERSAL ONE-LEGGED ANTENNA MOUNT. (TYPICAL OF TWO LOCATIONS)
14. CONTRACTOR TO PROVIDE A CHATSWORTH PRODUCTS INCORPORATED CABINET WITH METAL DOOR AND LOCKS THAT IS 24" HIGH EQUAL TO PART NUMBER 11840-724. PROVIDE CABINET WITH FAN KIT 12804-701; AND POWER STRIP 12820-703. MOUNT RACK ABOVE IN CORNER ABOVE EXISTING COMMUNICATIONS TERMINATION BOARD. PROVIDE NEW 3/4"PLYWOOD BACKING BEHIND RACK FOR MOUNTING ON WALL. PAINT PLYWOOD WITH GREY FIRE RETARDANT PAINT PRIOR TO INSTALLATION. WITHIN RACK PROVIDE NEW CISCO CATALYST 3750 48 PORT VERSION 2 POE SWITCH. CONTRACTOR TO ALSO PROVIDE NEW GENERAL ELECTRIC (GE) MDS INTREPID ULTRA SERIES INDOOR UNIT (IDU) 19" RACK MOUNTABLE POINT-TO-POINT RADIO SYSTEM CONFIGURED WITH 16 PROGRAMMABLE PORTS FOR T1 OR E1; AND TWO ETHERNET PORTS. ALSO PROVIDE POWER SUPPLY TO CONVERT 120VAC TO 48VDC AS RECOMMENDED BY GE TO POWER IDU. ALSO PROVIDE POE SURGE PROTECTOR ON CABLE BETWEEN IDU AND OUT DOOR UNIT (ODU). PROVIDE POWER TO TACK FROM SPARE 20A/1P BREAKER IN SPACE 36 OF EXISTING PANEL LA.
15. PROVIDE POWER TO HEATER/ BLOWER TRANSFORMERS FOR EXTERIOR CAMERAS FROM SPARE 20A/1P BREAKER IN SPACE 38 OF EXISTING PANEL LA.
16. PROVIDE A NEW J-BOX ON INSIDE OF HOUSEKEEPING 117 TO HOUSE HEATER/BLOWER TRANSFORMER AND SURGE PROTECTION DEVICES FOR EXTERIOR CAMERA. J-BOX SHALL BE SIZED FOR ALL MATERIALS AND PROVIDED WITH APPROPRIATE DIVIDERS DO SEPARATE POWER AND SIGNAL ITEMS.
17. PROVIDE HEATER/BLOWER TRANSFORMER AND SURGE PROTECTION DEVICES FOR THIS EXTERIOR CAMERA INSIDE OF MECHANICAL 108.
18. ALL CAT 5E CABLES FOR CAMERAS IN BUILDINGS 144TO BE RUN BACK TO NEW RACK IN MECHANICAL 108. VIDEO DATA WILL THEN BE TRANSMITTED BY RADIO TO BUILDING 85 WHERE IT WILL BE FORWARDED BY WAY OF THE EXISTING VA FIBER NETWORK BACK TO THE MAIN SERVER ROOM IN BUILDING 145.

Revisions:	Date

CONSULTANTS:

WPE #BR11046

WEST PLAINS ENGINEERING, INC.
1750 RAND ROAD • RAPID CITY, SD 57702
PHONE: (605) 348-7455 • FAX: (605) 348-9443
www.westplainsengineering.com
RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 7596
RAYMOND J. SIOMAN
SOUTH DAKOTA
11/16/12

ARCHITECT/ENGINEERS:

FOURFRONT DESIGN INC.
517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)
10.1749.008

Drawing Title: CCTV/SECURITY PLAN BLDGS 72, 85, 120, 144

Approved: Project Director

Project Title: CCTV Security Camera System REBID -

Location: Ft. Meade, South Dakota

Date: 11/16/12 | Checked: MRS | Drawn: VLS

Project Number: 568-12-103

Building Number: 72, 85, 120, 144

Drawing Number: E11.00

Dwg. 15 of 15

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

ELECTRICAL SYMBOLS

THESE SYMBOLS COMPRISE A STANDARD LIST; NOT ALL SYMBOLS MAY APPEAR ON THIS PROJECT.

- CEILING SURFACE MOUNT FIXTURE. (Capital letter indicates fixture type. Small letter indicates switching. Typical for all fixture types.)
- WALL FIXTURE
- RECESSED DOWN LIGHT FIXTURE
- SURFACE MOUNT FIXTURE
- RECESSED FIXTURE
- SHADING INDICATES EMERGENCY FIXTURES
- EMERGENCY LIGHTING W/BATTERY PACK
- EXIT SIGN (FACE(S) SHADED, ARROW INDICATES CHEVRON)
- POLE LIGHT FIXTURE
- OS — OCCUPANCY SENSOR
- OS M — PASSIVE INFRARED & ULTRASONIC OCCUPANCY SENSOR
- OS I — PASSIVE INFRARED OCCUPANCY SENSOR
- MOS — PASSIVE INFRARED AND ULTRASONIC OCCUPANCY SENSOR WALL SWITCH
- IOS — PASSIVE INFRARED OCCUPANCY SENSOR WALL SWITCH
- DOS — DUAL LEVEL PASSIVE INFRARED AND ULTRASONIC OCCUPANCY SENSOR WALL SWITCH
- SINGLE POLE SWITCH
- 2 — DOUBLE POLE SWITCH
- 3 — THREE-WAY SWITCH
- 4 — FOUR-WAY SWITCH
- D — DIMMER SWITCH
- PUSH BUTTON STATION
- EMERGENCY SHUTDOWN PUSHBUTTON
- LOADCENTER OR ELECTRICAL PANEL
- DISTRIBUTION PANEL
- SPECIAL EQUIPMENT CABINET-AS NOTED
- SWITCH BOARD SECTION
- DUPLEX CONVENIENCE RECEPTACLE
- DOUBLE DUPLEX CONVENIENCE RECEPTACLE
- POWER RECEPTACLE – AS NOTED
- SPECIAL PURPOSE OUTLET OR CONNECTION
- COMBINATION VOICE/DATA OUTLET
- INTERCOM
- VOICE OUTLET
- DATA OUTLET
- TV — TELEVISION OUTLET
- J — JUNCTION BOX
- B — BLANK OUTLET
- EH / # — TYPE OF EQUIP / EQUIP. NO. — SEE SCHEDULES
- F — FIRE ALARM MANUAL STATION
- D — HEAT DETECTOR (RATE OF RISE)
- D — HEAT DETECTOR (FIXED TEMP. ONLY)
- SD U — UNITARY TYPE SMOKE DETECTOR
- SD — SMOKE DETECTOR
- SD — DUCT SMOKE DETECTOR
- RA — REMOTE ANNUNCIATOR
- DH — DOOR HOLDER
- CH — FIRE ALARM CHIME/STROBE
- F — FIRE ALARM HORN/STROBE
- F M — MINI FIRE ALARM HORN/STROBE
- ST — FIRE ALARM STROBE
- FIRE SPRINKLER HEAD
- C — COMBINATION FIRE/SMOKE DAMPER
- AMP — AMPLIFIER
- VIDEO CAMERA
- MON — MONITOR
- DVR — DIGITAL VIDEO RECORDER
- ANT — POINT-TO-POINT RADIO ANTENNA
- CR — PROXIMITY CARD READER
- DS — DOOR POSITION SWITCH
- ES — ELECTRIC STRIKE
- MD — ALARM MOTION DETECTOR
- CABLETRAY
- TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSER
- SURFACE MOUNT RACEWAY
- GROUND
- MOTOR CONNECTION
- DISCONNECT SWITCH
- MAGNETIC STARTER
- COMBINATION STARTER/DISCONNECT
- MOTOR THERMAL SWITCH
- TR — TRANSFORMER
- TERM. BOARD
- H — HUMIDISTAT
- T — THERMOSTAT
- ECI-1,2,3 — CONDUIT IN WALL OR CEILING SPACE. ARROWS INDICATE HOME RUNS TO PANEL. NUMBERS INDICATE PANEL AND CIRCUIT IN PANEL

MISCELLANEOUS ELECTRICAL NOTES:

A. THE FACILITY ALREADY HAS AN EXISTING DOOR ACCESS SYSTEM. THE INTENT OF THIS PROJECT IS TO EXPAND ON THE EXISTING SYSTEM USING THE SAME PARTS AND MATERIALS ALREADY INSTALLED IN OTHER AREAS. THE PARTS AND MATERIALS SUPPLIED MUST MATCH THE EXISTING SYSTEM.

B. CONTRACTOR TO PROVIDE ALL INTERCONNECTING WIRING PER MANUFACTURER REQUIREMENTS TO MAKE A COMPLETE AND WORKING SYSTEM TO MATCH THE FORM AND FUNCTION OF THE EXISTING SYSTEM.

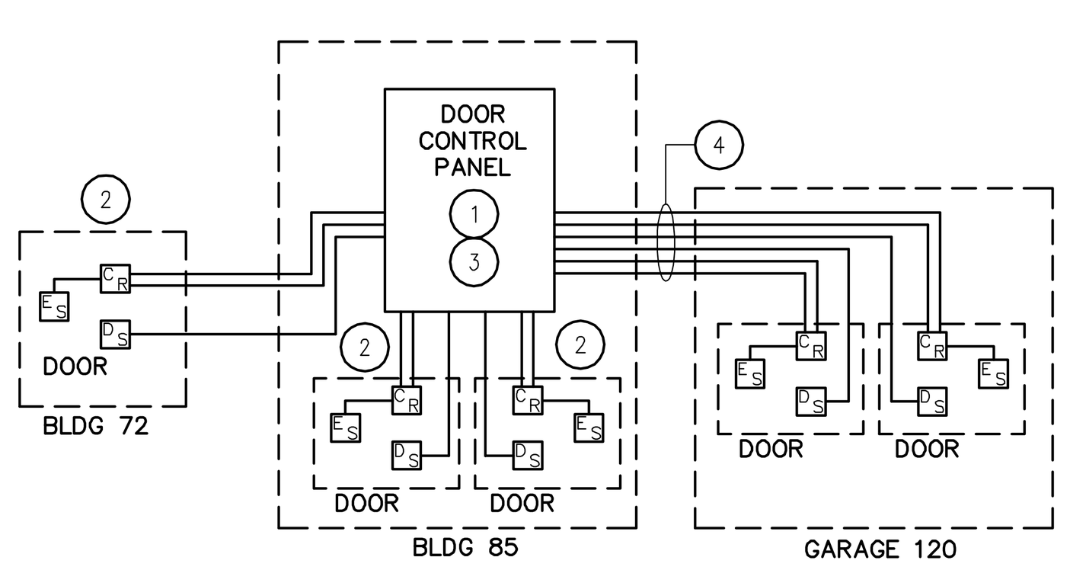
SPECIFIC ELECTRICAL NOTES: (#)

1. CONTRACTOR TO PROVIDE NEW DOOR CONTROL PANEL CONSISTING OF THE FOLLOWING: DATA NETWORK CONTROLLER TO BE JOHNSON CONTROLS MODEL CK721-A; THREE 2-DOOR CONTROLLER MODULES TO BE JOHNSON CONTROLS MODEL S300-DIN-RDR2SA; 24 VOLT LOCK POWER SUPPLY TO BE ALTRONIX MODEL SMP-10PM; LOCK POWER TRANSFORMER TO BE ALTRONIX MODEL T2428300; 12 VOLT CARD READER POWER SUPPLY TO BE ALTRONIX MODEL SMP-7PM; CARD READER TRANSFORMER TO BE ALTRONIX MODEL T2428175; LOCK RELAY BOARD TO BE BASE ELECTRONICS MODEL LV-8RS-N; 12V BATTERY BACK UP TO BE ADI ULTRATECH MODEL 12180; ENCLOSURE STATUS CONTACT EQUAL TO GENERAL ELECTRIC SENTROL MODEL 1032; END OF LINE RESISTOR PACKS EQUAL TO GRI MODEL 6644T; AND CONTROLLER ENCLOSURE TO BE KELE MODEL RET3826GY WITH FIRE RATED PLYWOOD BACKPLANE.

2. EACH DOOR LOCATION NOTED TO RECEIVE THE FOLLOWING: ONE ICLASS MULLION MOUNTED (DOOR FRAME) PROXIMITY CARD READER TO BE AN HID MODEL R10; ONE ELECTRIC STRIKE TO BE VON DUPRIN MODEL 6211; ONE DOOR STATUS CONTACT TO BE GENERAL ELECTRIC MODEL 2505A-L; AND END OF LINE RESISTOR PACKS EQUAL TO GRI MODEL 6644T. CONTRACTOR TO PROVIDE ALL CABLES NECESSARY TO INTERCONNECT AND TIE TO NEW CONTROL PANEL TO MAKE A COMPLETE AND WORKABLE SYSTEM MATCHING THE FUNCTION OF THE EXISTING SYSTEM.

3. CONTRACTOR SHALL PROVIDE ALL PROGRAMMING NECESSARY OF THE JOHNSON CONTROLS J2000 SECURITY SYSTEM TO INTEGRATE AND MONITOR THESE NEW COMPONENTS TO THE EXISTING SECURITY ACCESS AND MONITORING SYSTEM.

4. CONTRACTOR TO PROVIDE NEW 2" CONDUIT FROM GARAGE 120 TO BUILDING 85. ALL WIRING ASSOCIATED WITH CAMERA SYSTEM AND DOOR ACCESS SYSTEM FROM GARAGE 120 IS TO BE ROUTED IN THIS NEW CONDUIT BACK TO BUILDING 85 AND TERMINATED.



ACCESS CONTROL RISER DIAGRAM

NO SCALE

ELECTRICAL ABBREVIATIONS

A STANDARD LIST. NOT ALL WORDS APPEAR IN THESE DRAWINGS.

SEE SPECIFICATION SECTION "EQUIPMENT WIRING" FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

A or AMP	AMPERE
A/C	AIR CONDITIONING
A/E or AE	ARCHITECT & ENGINEER
ac	ABOVE COUNTER
AC	ALTERNATING CURRENT
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AFI or AFCI	ARC FAULT CIRCUIT INTERRUPTER
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERES INTERRUPTING CURRENT
AL	ALUMINUM
ANN	ANNUNCIATOR
AS	AUTOMATIC SENSORS
AWG	AMERICAN WIRE GAUGE
bc	BELOW COUNTER
BC	BELOW COUNTER
BH	BASKETBALL HOOP OPER
BL	BLEACHER ELECTRIC OPERATOR
BRD or BD	BOARD
BUH	BLAST UNIT HEATER
C or COND	CONDUIT
C/B or CB	CIRCUIT BREAKER
CAT	CATEGORY
CCT or CKT	CIRCUIT
CM	CARBON MONOXIDE SENSOR
CO	CARBON MONOXIDE
COMB	COMBINATION
CONF	CONFERENCE
CP	CEILING PROJECTOR
CTC	CABLE TERMINATION CABINET
Cu or CU	COPPER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
DC	DIRECT CURRENT
DC	DISTRIBUTION CABINET
DP	DISTRIBUTION PANEL
DISC	DISCONNECT
DISP	DISPOSAL
DL	DOCK LEVELER
DN or DWN	DOWN
DR	DOOR
DVR	DIGITAL VIDEO RECORDER
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
EC	ELECTRICAL CABINET
EF	EXHAUST FAN
EH	ELECTRICAL HEAT
ELEC	ELECTRIC OR ELECTRICAL
EHD	ELECTRIC HAND DRYER
EM or EMERG	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRICAL NON-METALLIC TUBING
EUH	ELECTRIC UNIT HEATER
EWC	ELECTRIC WATER COOLER
EX	EXISTING
EXP	EXPLOSION PROOF
F or FUS	FUSE OR FUSIBLE
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FL, FLU or FLUOR	FLUORESCENT
FLA	FULL LOAD AMPERES
FVNR	FULL VOLTAGE, NON-REVERSING
FVR	FULL VOLTAGE, REVERSING
GC	GENERAL CONTRACTOR
GD	GARBAGE DISPOSAL
GEN	GENERATOR
GFI or GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GRC	GALVANIZED RIGID CONDUIT
GND or GRND	GROUND
H & AC	HEATING & AIR CONDITIONING
H & V	HEATING & VENTILATING
HA	HANDICAP ACCESS DOOR
HD	HAND DRYER
HID	HIGH INTENSITY DISCHARGE
HP	HORSE POWER
HPS	HIGH PRESSURE SODIUM
HTG	HEATING
HTR	HEATER
HVAC	HEATING, VENTILATION & AIR CONDITIONING
HZ	HERTZ (CYCLES/SEC)
IC	INTERRUPTING CURRENT
IGR	ISOLATED GROUND RECEPTACLE
IMC	INTERMEDIATE METAL CONDUIT
INC	INCANDESCENT
ISO	ISOLATED OR ISOLATION
J, JB or J-BOX	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT - AMPERE
KVAR	KILOVOLT - AMPERE REACTIVE
KW	KILOWATT
KWH	KILOWATT - HOUR
LA	LIGHTNING ARRESTOR
LT	LIGHT
LTG	LIGHTING
LTS	LIGHTS
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILS
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MFS	MAIN FUSIBLE SWITCH
MH	METAL HALIDE
MLO	MAIN LUG ONLY
MON	MONITOR
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MTS	MOTOR THERMAL SWITCH
MV	MERCURY VAPOR
NA or N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NEU, NEUT or N	NEUTRAL
NF	NON-FUSED
NL	NIGHT LIGHT
NO	NORMALLY OPEN
OFF, OF, or OFC	OFFICE
OH	OVERHEAD
OHD	OVERHEAD DOOR
P	POLE
PA	PUBLIC ADDRESS
PB	PUSH BUTTON
PH	PHASE
PLBG	PLUMBING
PNL	PANEL
PR or pr	PAIR
PRV	POWER ROOF VENTILATOR
PS	PULL SWITCH
PS	PROTECTION SCREEN
PTZ	PAN TILT ZOOM
PVC	POLYVINYL CHLORIDE
PWR	POWER
RCP	REFLECTED CEILING PLAN
REC or RECEPT	RECEPTACLE
REF or REFRIG	REFRIGERATOR
RF	RADIO FREQUENCY
RH	RADIANT HEAT
RH	RANGE HOOD
RLY	RELAY
RM	ROOM
RMS	
SCC	SHORT CIRCUIT CURRENT
SD	SMOKE DETECTOR
SFR	SAFETY RECEPTACLE
SFTY	SAFETY
SHLD	SHIELD OR SHIELDED
SIG	SIGNAL
SMR	SURFACE MOUNT RACEWAY
SN	SOLID NEUTRAL
SP	SUMP PUMP
SPECS	SPECIFICATIONS
SPKR	SPEAKER
SPR	SPLIT WIRE RECEPTACLE
SW	SWITCH
SWBD	SWITCH BOARD
TC	TEMPERATURE CONTROL
TC	TELEPHONE CABINET
TCC	TEMPERATURE CONTROL CONTRACTOR
TEL	TELEPHONE
TL	TWIST LOCK
TR, TRANS or TRFMR	TRANSFORMER
TTB	TELEPHONE TERMINATION BOARD
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UV	UNIT VENTILATOR
V	VOLT
VFD	VARIABLE FREQUENCY DRIVE
W	WATT OR WIRE
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
WTR or H20	WATER
WS	WINDOW SHADE
XFMR	TRANSFORMER
Y	WYE CONNECTION
\U+0278	PHASE
\U+0394	DELTA

CCTV CAMERA SCHEDULE

CAMERA DESIGNATION LETTER	SHOWN ON DWG SHEET #	CAMERA TYPE: 360 PANORAMIC	CAMERA TYPE: 180 PANORAMIC	CAMERA TYPE: PTZ	CAMERA TYPE: FISHEYE	CAMERA TYPE: FIXED	MOUNTING: WALL	MOUNTING: RECESSED CEILING	MOUNTING: SURFACE CEILING	MOUNTING: PENDENT	OPTIONS: HEATER/ BLOWER	OPTIONS: DAY/ NIGHT	REMARKS
C1	E3.00		X				X				X	X	NOTES: 4
C2	E3.00	X						X					NOTES: 2
C3	E3.00	X						X					NOTES: 2
C4	E3.00		X				X				X	X	NOTES: 4
C5	E3.00	X						X					NOTES: 2
C6	E3.00	X								X			NOTES: 2
C7	E3.00		X					X					NOTES: 2
C8	E3.00		X					X					NOTES: 2
C9	E3.00					X		X					NOTES: 2, 3
C10	E3.00					X		X					NOTES: 2
C11	E3.00	X						X					NOTES: 2
C12	E3.00	X						X					NOTES: 2
C13	E3.00	X						X					NOTES: 2
C14	E4.00					X		X					NOTES: 2, 3
C15	E4.00					X		X					NOTES: 2, 3
C16	E4.00		X					X					NOTES: 2
C17	E4.00		X					X					NOTES: 2
C18	E4.00					X		X					NOTES: 2
C19	E4.00		X				X				X	X	NOTES: 4
C20	E4.00	X						X					NOTES: 2
C21	E3.00		X							X			NOTES: 1
C22	E4.00		X					X					NOTES: 2
C23	E4.00	X						X					NOTES: 2
C24	E5.00		X						X				NOTES: 1
C25	E5.00					X		X					NOTES: 2, 3
C26	E5.00					X		X					NOTES: 2, 3
C27	E5.00	X						X					NOTES: 2
C28	E5.00	X						X					NOTES: 2
C29	E5.00	X						X					NOTES: 2
C30	E5.00	X						X					NOTES: 2
C31	E5.00					X		X					NOTES: 2, 3
C32	E5.00	X						X					NOTES: 2
C33	E5.00	X					X				X	X	NOTES: 4
C34	E5.00		X				X						
C35	E5.00	X							X				NOTES: 1
C36	E5.00		X					X					NOTES: 2
C37	E5.00		X					X					NOTES: 2
C38	E6.00		X						X				NOTES: 1
C39	E6.00					X				X			NOTES: 5
C40	E6.00		X				X						
C41	E6.00	X							X				NOTES: 1
C42	E6.00		X				X				X	X	NOTES: 4
C43	E6.00		X				X				X	X	NOTES: 4
C44	E7.00		X							X			NOTES: 1
C45	E7.00	X					X				X	X	NOTES: 4
C46	E7.00	X						X					NOTES: 2
C47	E7.00	X					X				X	X	NOTES: 4
C48	E7.00	X						X					NOTES: 2
C49	E7.00		X							X			NOTES: 1
C50	E7.00					X		X					NOTES: 2
C51	E7.00					X		X					NOTES: 2
C52	E7.00		X				X				X	X	NOTES: 4
C53	E7.00	X						X					NOTES: 2
C54	E7.00		X					X					NOTES: 2
C55	E7.00		X				X				X	X	NOTES: 4
C56	E7.00		X						X				NOTES: 1
C57	E8.00					X			X				NOTES: 6
C58	E8.00					X			X				NOTES: 6
C59	E8.00					X			X				NOTES: 6
C60	E8.00					X			X				NOTES: 6
C61	E8.00	X						X					NOTES: 2
C62	E8.00					X		X					NOTES: 2
C63	E8.00			X			X				X	X	NOTES: 4
C64	E8.00					X		X					NOTES: 2
C65	E8.00	X						X					NOTES: 2
C66	E8.00			X			X				X	X	NOTES: 4
C67	E8.00			X			X				X	X	NOTES: 4
C68	E8.00		X					X					NOTES: 2
C69	E8.00		X					X					NOTES: 2
C70	E8.00			X			X				X	X	NOTES: 4
C71	E8.00	X						X					NOTES: 2
C72	E9.00		X							X			NOTES: 2
C73	E9.00		X							X			NOTES: 2
C74	E9.00		X					X					NOTES: 2
C75	E9.00		X					X					NOTES: 2
C76	E9.00		X					X					NOTES: 2
C77	E9.00		X					X					NOTES: 2
C78	E9.00	X						X					NOTES: 2
C79	E9.00		X					X					NOTES: 2
C80	E9.00		X					X					NOTES: 2
C81	E10.00		X						X				NOTES: 1
C82	E10.00	X						X					NOTES: 2
C83	E10.00		X					X					NOTES: 2
C84	E10.00		X					X					NOTES: 2
C85	E10.00	X								X			NOTES: 2
C86	E10.00		X				X						
C87	E10.00		X				X				X	X	NOTES: 4
C88	E8.00					X		X					NOTES: 2, 3
C89	E4.00		X				X				X	X	NOTES: 4
C90	E11.00		X				X				X	X	NOTES: 4, 7
C91	E11.00		X				X				X	X	NOTES: 4, 7
C92	E11.00		X				X				X	X	NOTES: 4, 7
C93	E11.00				X				X				NOTES: 8
C94	E11.00				X				X				NOTES: 8
C95	E11.00				X				X				NOTES: 8
C96	E11.00				X				X				NOTES: 8
C97	E11.00				X				X				NOTES: 8
C98	E11.00				X				X				NOTES: 8
C99	E11.00				X				X				NOTES: 8
C100	E11.00		X				X				X	X	NOTES: 4
C101	E11.00				X		X						
C102	E11.00		X				X				X	X	NOTES: 4, 7
C103	E11.00		X				X				X	X	NOTES: 4, 7
C104	E11.00				X			X					NOTES: 2
C105	E11.00				X			X					NOTES: 2
C106	E11.00				X				X				NOTES: 8
C107	E11.00					X	X				X		NOTES: 4, 7
C108	E11.00					X	X				X		NOTES: 4, 7
C109	E11.00				X		X						NOTES: 9
C110	E11.00				X		X						NOTES: 9
C111	E7.00			X									NOTES: 10

NOTES:

1. CAMERA IS BEING MOUNTED ON HARD CEILING. CONTRACTOR WILL NEED TO PROVIDE WIREMOLD FOR ALL CABLING TO CAMERA.
2. CAMERA IS BEING MOUNTED IN LAY-IN CEILING. CONTRACTOR TO PROVIDE INDEPENDENT SUPPORT FOR CAMERA FROM STRUCTURE.
3. CAMERA IS BEING MOUNTED OVER COUNTER. CAMERA TO VIEW ACTIVITY ON COUNTER.
4. PROVIDE 120V CONNECTION AND 12V DC TRANSFORMER FOR HEATER/BLOWER.
5. CAMERA IS BEING MOUNTED ON HARD CEILING IN AN UNFINISHED SPACE. CONTRACTOR MAY SURFACE MOUNT CONDUIT TO CAMERA.
6. CAMERA IS BEING MOUNTED ON HARD CEILING IN CORNER IN AN ISOLATION ROOM. CONTRACTOR TO PROVIDE VANDAL RESISTANT ENCLOSURE WITH INFRARED (IR) LIGHTING FOR COVERAGE OF ROOM SERVED.
7. CAMERA IS BEING MOUNTED ON EXTERIOR ROCK WALL. CONTRACTOR WILL NEED TO PROVIDE PLYWOOD BACKING TO PROVIDE A SURFACE BEHIND CAMERA ENCLOSURE TO ENSURE WEATHER TIGHT SEAL.
8. CAMERA IS BEING MOUNTED ON HARD CEILING. CONTRACTOR TO ROUTE ALL CABLING TO CAMERA THROUGH ATTIC SPACE.
9. CAMERA IS BEING MOUNTED ON WALL. CONTRACTOR TO ROUTE ALL CABLING TO CAMERA THROUGH ATTIC SPACE AND THEN INSIDE WALL DOWN TO CAMERA LOCATION.
10. POST MOUNTED CAMERA ABOVE BUILDING 145 PENTHOUSE ROOF.

Revisions: | Date

CONSULTANTS:

WPE #BR11046

WPE WEST PLAINS ENGINEERING, INC.
1750 RAND ROAD ▪ RAPID CITY, SD 57702
PHONE: (605) 348-7455 ▪ FAX: (605) 348-9445
www.westplainsengineering.com
RAPID CITY, SD ▪ SIOUX FALLS, SD ▪ CASPER, WY ▪ CEDAR RAPIDS, IA

REGISTERED PROFESSIONAL ENGINEER REG. NO. 7595 MICHAEL RAYMOND SIGMAN SOUTH DAKOTA 11/16/12

ARCHITECT/ENGINEERS:

FOURFRONT DESIGN INC.
517 Seventh Street
Rapid City, SD 57701
(605) 342-9470
(605) 348-0571 (fax)

10.1749.008

Drawing Title: ELECTRICAL SYMBOLS/ABBREVIATIONS/SCHEDULES/RISER

Approved: Project Director

Project Title: CCTV Security Camera System REBID -

Location: Ft. Meade, South Dakota

Date: 11/16/12 | Checked: MRS | Drawn: VLS

Project Number: 568-12-103

Building Number: 113, 145, 146, 148

Drawing Number: E12.00

Office of Construction and Facilities Management

Department of Veterans Affairs